APPENDIX C— DEFERRED TERMS

A. U.S. Patent No. RE 43,633

U.S. PATENT NO. RE 43,633			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
Preambles	'633 patent: 17, 62, 101, 146	PROPOSED CONSTRUCTION: Preambles are not limiting	Preambles are limiting.
"means for determining a beginning position address of a textual source material stored in an electronic database"	'633 patent: 17, 101	PROPOSED CONSTRUCTION: Function: Determining a beginning position address of textual source material stored in an electronic database Structure: A computer having a visual editor and grammar parser programmed to assign a character position for the first character of a given set of text within an open text file, and equivalents thereof INTRINSIC EVIDENCE: *See,* visual editor 19 of Fig. 1 and algorithm described in Figures 1 and 2 of the '633 Patent and Col. 5:4-25 ("The first module is an electronic viewer that gives the user access to reference information on each word in the electronic text at a word by word level. The second module is a relational database that allows a user to create word lists with practically no limit in size. The two modules are integrated to	Subject to §112 ¶ 6. Function: "determining a beginning position address of a textual source material stored in an electronic database" Structure: None/indefinite **Extrinsic Evidence:** Materials from prior Sentius litigations. Declaration of Jon Weissman.

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		provide the user with everything needed to read the foreign language quickly and enjoyably, as well as to build their own individual vocabulary. FIG. **1** is a block schematic diagram of an exemplary embodiment of the invention that implements a language learning system. An electronic book and/or a multi-media source material is provided as a teaching resource. A text file **10** and/or a multimedia source 14, consisting of an audio/video file **11** and synchronized text **13**, which may include sound, images, and/ or video is edited during construction of a linked text database by a visual editor **19** that used to build a wordified database **20**. The database **20** sources a grammar parser **23** and a link engine **22** that builds an index **21** which, in turn, locates each textual and audio/video reference in the source material. The index provides a location for each reference in a database **12** that includes a relational database engine **15**, and linkable entities, such as text references **16**, audio references **17**, graphic references **18**, and the like."); 	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		7:3-12 ("The word cutting process is accomplished using a simple visual editor, for example a point and click system using a pointing device, such as a mouse. The process divides the text into the individual components of text that are linked with the additional reference material. The original text is provided by a publisher in electronic form in a raw binary text format (e.g. an ASCII text file or other word processor file). This text is then divided up into the component word or phrases in preparation for the next step."); 7:30-45 ("A key feature of the system format is the method by which the original book text is indexed and linked with the external references. During the compile process an image of the text is created. When the image is created, the cuts are indexed based upon the position offset from the beginning of the text. The start and end points of the cut text are recorded in a look-up table along with the links to external references. The number and type of links for any component is dynamic. This means that a single entry could have several different references attached to it, each	

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		containing different forms of data. The user interacts with the electronic book using a pointing device. When the user "clicks" within the text image, the location of the pointer is determined. The location is con- verted into a position offset from the beginning of the text and used to determine which component word or phrase was selected.") 8:29-33 ("The electronic viewer module provides the following pulldown menus: File, Edit, Words, View. The File Menu includes: 1. Open (opens up a book for reading); 2. Close (closes a book)"); 8:50-60 ("1. Find (displays the search dialogue box); 2. Find Next (finds the next entry using the previously entered search word); 3. Next (goes to the next word in the personal dictionary based on the current sort setting) 5. Jump to Text Gumps from the personal dictionary to the source of the word in the original text); and 6. Flash Words (displays the words in the personal dictionary in slide show fashion)."); and	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		10:41-50 ("dictionary fields); 2. Cut (cuts a highlighted block of text in the personal dictionary fields); 3. Copy (copies the selected text into the clipboard in either the electronic viewer module or the personal dictionary); and 4. Paste (pastes the copied text into the target field in the personal dictionary). The Words Menu includes: 1. Find (displays the search dialogue box)") EXTRINSIC EVIDENCE: Agreed Claim Construction Order in Sentius v BlackBerry, September 22, 2017 (Doc. 87) p. 3 ("Function: determining a beginning position address of textual source material stored in an electronic database. Structure: a computer having a visual editor and grammar parser programmed to assign a character position for the first character of a given set of text within an open text file, and equivalents thereof. ('731 patent at 5:5-19; 7:29-39)") Document Image Understanding: Geometric and Logical Layout, pp. 386-389. ("Document Image Understanding: Geometric and Logical Layout" by Robert Haralick 1994),	

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		describes how technical documents are opened and loaded into word processor software so that its structure may be determined, and the document may be cut/parsed into its logical discrete pieces; e.g., text (words and phrases) and non-text (images), portions, through steps such as segmentation. Refer to Page 386, Col. 1; Page 386, Col. 2; Page 387, Col. 1; Page 389, Col. 1.") A Structure Editor for Abstract Document Objects, pp. 418, 412, and 430-435. ("A Structure Editor for Abstract Document Objects" by Gary Kimura (1986), is several decades old, and describes how common operating systems support document viewers and editors. It describes how objects are selected by their absolute or relative positions when opened, viewed and edited (See p 418). It also discloses how selection is done through use of keystrokes (p 422). Figure 16 describes the commonly used structure for these routine features in word processors and computer operating systems, with support for common editing and viewing operations (p 430- p 435) including type, move, copy, edit, delete,	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		and other such commands on objects. It also explains the routine nature of display operations ("'Formatting and viewing a document for editing or reading involves mapping its abstract representation to a concrete representation (formatting) and then to a display (viewing). The functions described here are used for both editing and reading; they are two distinct functions: • Viewing or visiting an object. This involves creating windows on the screen that correspond to the structure of the document •Putting a concrete image inside each window. The content of a window either corresponds to the object's raw data or is the result of a formatting operation.") (p. 422).") Document Formatting Systems, pp. 419-420, 422, 432 and 444-449. ("Document Formatting Systems: Survey, Concepts and Issues", by Furuta et al (1982) surveys document editing and viewing systems available several decades ago and the routine support for typical operations from the operating systems and the editors. It discloses allocating,	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		mapping and placing objects (p 420, p 447-449). ("Within the object model framework, we can consider the major operations of document processing as mappings from objects to objects. Editing operations are defined as mappings from either abstract to abstract objects or concrete to concrete objects. Conventional text editing operations map logical text objects to logical text objects; for example, a text insertion or deletion may be a mapping from strings to strings or from paragraphs to paragraphs. Also, editing operations on an already formatted document produce concrete objects from concrete objects. An example of this type of editing is interactively inserting or deleting text from an already formatted paragraph, thereby mapping concrete paragraphs to concrete paragraphs; interactive layout operations such as moving formatted text, tables, or figures around a document are also in this category.") (p. 419)("The abstract document editor is a graphic version of the abstract object module and uses the window object module. The editor understands four classes of commands: structural viewing, content viewing,	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		structural editing, and data editing.")(p. 432).") Ten Years of Window Systems, pp. 35-37. ("Ten Years of Window Systems – A Retrospective View" by Warren Teitelman, discloses how window systems and languages such as Smalltalk directly supported "cut and paste", and how text could be selected and inserted through use of inbuilt commands (p 36). Also disclosed is the use of address spaces in Smalltalk 76 and Smalltalk 1980.") The Text Editor Sam, pp.6-8 and 18. ("The Text Editor Sam: by Rob Pike, the use of addresses and offsets are disclosed (See p 6-8). The use of the mouse for interactive editing for the typical operations, such a select, delete, cut and paste, etc. is also disclosed in Figure 2 and Figure 4, for instance. The routine use of pointers, offsets and addresses is also disclosed (See p 18).") U.S. Patent Nos, 5,436,637 and 5,581,670. ("In US Patent 5,436,637, the use of standard operations such as cut, paste, open, copy, delete, is shown	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		in Figure 6A-F (See also Col 2). Use of offsets and addresses is also disclosed (See Col 13)") ("The ability to convert bitmap positions to locations within the document data structures is disclosed in US Patent 5,581,670 (See Col 4 and Col 4). Typical operations such as cut & paste, delete and other selection operations are disclosed (See Col 33-36).") Emacs - Version 18.59 and VI- Version 3.0. ("Emacs -Version 18.59 (ftp://ftp.gnu.org/old-gnu/emacs/) and VI (VIM) Version 3.0 (ftp://ftp.vim.org/pub/vim/unix) are examples of two known visual editors that were capable, in conjunction with a processor's operating system, of opening a document and parsing, indexing and displaying its words during editing. These visual editors likewise could select a display location where user input was received and convert that display location into a position or location within the document structure at which the edit should take place. Either of these visual editors would be a suitable base upon which programming could be added to achieve	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		the claimed functionality of creating look-up table entries for certain words to be displayed in pop-up windows alongside the respective word when desired by a user.") **Declaration of V. Madisetti,** ¶61-64, 81, 99, and 110-112.	
"means for cutting the textual source material into a plurality of discrete pieces"	'633 patent: 17, 101,	PROPOSED CONSTRUCTION: Function: Cutting the textual source material into a plurality of discrete pieces Structure: A computer having a visual editor and grammar parser that are utilized to cut or parse the text into individual components of words or phrases, and equivalents thereof INTRINSIC EVIDENCE: (*See*, visual editor 19 and grammar parser 23 of Fig. 1, and algorithm described in Figures 1 and 2 and the '633 Patent, Col. 5:4-25 ("The first module is an electronic viewer that gives the user access to reference information on each word in the electronic text at a word by word level. The second module is a relational database that allows a user to create word lists with practically no limit in size. The two modules are integrated to provide the user with everything needed	Subject to §112 ¶ 6. Function (agreed): "cutting the textual source material into a plurality of discrete pieces" Structure: None/indefinite **Extrinsic Evidence:** Materials from prior Sentius litigations. Declaration of Jon Weissman.

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		to read the foreign language quickly and enjoyably, as well as to build their own individual vocabulary. FIG. **1** is a block schematic diagram of an exemplary embodiment of the invention that implements a language learning system. An electronic book and/or a multi-media source material is provided as a teaching resource. A text file **10** and/or a multimedia source 14, consisting of an audio/video file **11** and synchronized text **13**, which may include sound, images, and/ or video is edited during construction of a linked text database by a visual editor **19** that used to build a wordified database **20**. The database **20** sources a grammar parser **23** and a link engine **22** that buildings an index **21** which, in turn, locates each textual and audio/video reference in the source material. The index provides a location for each reference in a database **12** that includes a relational database engine **15**, and likable entities, such as text references **16**, audio references **17**, graphic references **18**, and the like."); 7:1-21 ("The actual indexing process is completed in several steps, including	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		word cuts, linking, and compilation. Word Cuts. The word cutting process is accomplished using a simple visual editor, for example a point and click system using a pointing device, such as a mouse. The process divides the text into the individual components of text that are linked with the additional reference material. The original text is provided by a publisher in electronic form in a raw binary text format (e.g. an ASCII text file or other word processor file). This text is then divided up into the component word or phrases in preparation for the next step. Linking. The linking process takes the text after the word cut process and links it to an external reference. The database **20** sources a grammar parser **23** and a link engine **22** that builds an index **21** which, in turn, locates each textual and audio/video reference in the source material. In the case of language learning, the component words and phrases are linked to a foreign language dictionary. In other cases, links may be made to other reference materials, such as graphics and/or sound."); EXTRINSIC EVIDENCE:	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		Sentius v BlackBerry Agreed Claim Construction Order, p. 3 ("Function: cutting the textual source material into a plurality of discrete pieces. Structure: a computer having a visual editor and grammar parser that are utilized to cut the text into individual components of words or phrases, and equivalents thereof ('731 patent at 5:7-19; 7:1-10)") *Sentius v Flyswat*, Claim Construction Order, p. 30 ("3. Construction of Element. "Cutting said source material image into said discrete pieces" means "separating the pieces of the source material image from other pieces of the source material," with "said source material image" referring to the "source material image" in the first clause in element 8.1 and "said discrete pieces" referring to the "discrete pieces" described in element 8.1.") The Text Editor Sam, pp.6-8 and 18. ("The Text Editor Sam: by Rob Pike, the use of addresses and offsets are disclosed (See p 6-8). The use of the mouse for interactive editing for the typical operations, such a select, delete,	

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		cut and paste, etc. is also disclosed in Figure 2 and Figure 4, for instance. The routine use of pointers, offsets and addresses is also disclosed (See p 18).") U.S. Patent Nos, 5,436,637 and 5,581,670. ("In US Patent 5,436,637, the use of standard operations such as cut, paste, open, copy, delete, is shown in Figure 6A-F (See also Col 2). Use of offsets and addresses is also disclosed (See Col 13)") ("The ability to convert bitmap positions to locations within the document data structures is disclosed in US Patent 5,581,670 (See Col 4 and Col 4). Typical operations such as cut & paste, delete and other selection operations are disclosed (See Col 33-36).") Emacs - Version 18.59 and VI- Version 3.0. ("Emacs -Version 18.59 (ftp://ftp.gnu.org/old-gnu/emacs/) and VI (VIM) Version 3.0 (ftp://ftp.vim.org/pub/vim/unix) are examples of two known visual editors that were capable, in conjunction with a processor's operating system, of opening a document and parsing, indexing and displaying its words	

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		during editing. These visual editors likewise could select a display location where user input was received and convert that display location into a position or location within the document structure at which the edit should take place. Either of these visual editors would be a suitable base upon which programming could be added to achieve the claimed functionality of creating look-up table entries for certain words to be displayed in pop-up windows alongside the respective word when desired by a user.") **Declaration of V. Madisetti,** ¶34, 61-64, 73-76, 82, 99, 103-109, and 113-116.	
"means for determining starting point addresses and ending point addresses of the plurality of discrete pieces based upon the beginning position address" / "means for determining a starting point address and an ending point address of at least one of the plurality of discrete pieces based	'633 patent: 17, 101	PROPOSED CONSTRUCTION: Function: Determining a starting point address and an ending point address of at least one of the plurality of discrete pieces based upon the beginning position address Structure: A computer having a visual editor and grammar parser programmed to identify, the starting and ending character positions of words in a document, and equivalents thereof	Subject to §112 ¶ 6. Function: "determining starting point addresses and ending point addresses of the plurality of discrete pieces based upon the beginning position address" / "determining a starting point address and an ending point address of at least one of the plurality of discrete pieces based upon the beginning position address" Structure: None/indefinite

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
upon the beginning position address"		INTRINSIC EVIDENCE: (See, visual editor 19, wordified database 20, grammar parser 23, and link engine 22 of Fig. 1 and algorithm described in Figures 1 and 2 of the '633 Patent and Col. 5:4-19 ("The first module is an electronic viewer that gives the user access to reference information on each word in the electronic text at a word by word level. The second module is a relational database that allows a user to create word lists with practically no limit in size. The two modules are integrated to provide the user with everything needed to read the foreign language quickly and enjoyably, as well as to build their own individual vocabulary. FIG. **1** is a block schematic diagram of an exemplary embodiment of the invention that implements a language learning system. An electronic book and/or a multi-media source material is provided as a teaching resource. A text file **10** and/or a multimedia source 14, consisting of an audio/video file **11** and synchronized text **13**, which may include sound, images, and/ or video is edited during construction of a linked	**Extrinsic Evidence:** Materials from prior Sentius litigations. Declaration of Jon Weissman.

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		text database by a visual editor **19** that used to build a wordified database **20**."); 6:48-59 ("FIG. 2 is a flow diagram in which the mechanism for indexing and linking text to external references is shown according to the invention. To find a reference to a particular word or other selected entry displayed on the screen, the user clicks the text that is viewed with a pointing device, such as a mouse (**200**). The click position is determined and used to calculate an offset value within the text (**200**). In the example shown in FIG. **2**, the user clicks at a particular location, e.g. horizontal and vertical coordinates **100** and **75**, respectively, and an offset value of **25** is returned. The offset value is compared to the start and end position indices stored in a look-up table (**201, 202**)."); 7:22-49 ("Compilation. After linking, the text and references are compiled. During compilation, the cut text is reassembled to create an image of the text that the end user sees. At this point additional formatting may be applied to the text for final display. Indices of the	

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		component words and phrases are built with links to the reference material and duplicate references are consolidated to conserve memory and storage requirements. A key feature of the system format is the method by which the original book text is indexed and linked with the external references. During the compile process an image of the text is created. When the image is created, the cuts are indexed based upon the position offset from the beginning of the text. The start and end points of the cut text are recorded in a look-up table along with the links to external references. The number and type of links for any component is dynamic. This means that a single entry could have several different references attached to it, each containing different forms of data. The user interacts with the electronic book using a pointing device. When the user "clicks" within the text image, the location of the pointer is determined. The location is converted into a position offset from the beginning of the text and used to determine which component word or phrase was selected. The process involves comparing the offset	

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		with the start and end values stored in the look-up table as discussed above in connection with FIG. **2.** When the offset value falls between a component's start and end points, a match is made and the external references can be resolved.") EXTRINSIC EVIDENCE: *Sentius v BlackBerry* Agreed Claim Construction Order, p.3 ("Function: determining a starting point address and an ending point address of at least one of the plurality of discrete pieces based upon the beginning position address. Structure: a computer having a visual editor and grammar parser programmed to identify, for any given words in the file to be linked, their starting and ending character positions offset from the first character position, and equivalents thereof ('731 patent at 5:5-19; 7:29-39) A Structure Editor for Abstract Document Objects, pp. 418, 412, and 430-435. ("A Structure Editor for Abstract Document Objects" by Gary Kimura (1986), is several decades old, and describes how common operating systems support document viewers and	

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		editors. It describes how objects are selected by their absolute or relative positions when opened, viewed and edited (See p 418). It also discloses how selection is done through use of keystrokes (p 422). Figure 16 describes the commonly used structure for these routine features in word processors and computer operating systems, with support for common editing and viewing operations (p 430- p 435) including type, move, copy, edit, delete, and other such commands on objects. It also explains the routine nature of display operations ("'Formatting and viewing a document for editing or reading involves mapping its abstract representation to a concrete representation (formatting) and then to a display (viewing). The functions described here are used for both editing and reading; they are two distinct functions: • Viewing or visiting an object. This involves creating windows on the screen that correspond to the structure of the document •Putting a concrete image inside each window. The content of a window either corresponds to the object's raw data or is	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		the result of a formatting operation.") (p. 422).") Document Formatting Systems, pp. 419-420, 422, 432 and 444-449. ("Document Formatting Systems: Survey, Concepts and Issues", by Furuta et al (1982) surveys document editing and viewing systems available several decades ago and the routine support for typical operations from the operating systems and the editors. It discloses allocating, mapping and placing objects (p 420, p 447-449). ("Within the object model framework, we can consider the major operations of document processing as mappings from objects to objects. Editing operations are defined as mappings from either abstract to abstract objects or concrete to concrete objects. Conventional text editing operations map logical text objects to logical text objects; for example, a text insertion or deletion may be a mapping from strings to strings or from paragraphs to paragraphs. Also, editing operations on an already formatted document produce concrete objects from concrete objects. An example of this type of editing is interactively inserting or deleting text from an already	

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		formatted paragraph, thereby mapping concrete paragraphs to concrete paragraphs; interactive layout operations such as moving formatted text, tables, or figures around a document are also in this category.") (p. 419)("The abstract document editor is a graphic version of the abstract object module and uses the window object module. The editor understands four classes of commands: structural viewing, content viewing, structural editing, and data editing.")(p. 432).") The Text Editor Sam, pp.6-8 and 18. ("The Text Editor Sam: by Rob Pike, the use of addresses and offsets are disclosed (See p 6-8). The use of the mouse for interactive editing for the typical operations, such a select, delete, cut and paste, etc. is also disclosed in Figure 2 and Figure 4, for instance. The routine use of pointers, offsets and addresses is also disclosed (See p 18).") U.S. Patent Nos, 5,436,637 and 5,581,670. ("In US Patent 5,436,637, the use of standard operations such as cut, paste, open, copy, delete, is shown in Figure 6A-F (See also Col 2). Use of	

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		offsets and addresses is also disclosed (See Col 13)") ("The ability to convert bitmap positions to locations within the document data structures is disclosed in US Patent 5,581,670 (See Col 4 and Col 4). Typical operations such as cut & paste, delete and other selection operations are disclosed (See Col 33-36).") Emacs - Version 18.59 and VI- Version 3.0. ("Emacs -Version 18.59 (ftp://ftp.gnu.org/old-gnu/emacs/) and VI (VIM) Version 3.0 (ftp://ftp.vim.org/pub/vim/unix) are examples of two known visual editors that were capable, in conjunction with a processor's operating system, of opening a document and parsing, indexing and displaying its words during editing. These visual editors likewise could select a display location where user input was received and convert that display location into a position or location within the document structure at which the edit should take place. Either of these visual editors would be a suitable base upon which programming could be added to achieve the claimed functionality of creating	

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		look-up table entries for certain words to be displayed in pop-up windows alongside the respective word when desired by a user.") **Declaration of V. Madisetti,** ¶65-70, 110-112.	
"means for selecting a discrete portion of an image of the source material"	'633 patent: 17, 101	PROPOSED CONSTRUCTION: Function: selecting a discrete portion of an image of the source material Structure: "a pointing device, such as a mouse and an electronic display and user interface of a computer" INTRINSIC EVIDENCE: (*See* mouse/position 200, look- up table 201/202, link 203 and display 204 in Fig. 2 and application program 42 in Fig. 1 and the '633 Patent, Col.4:14-23 ("The exemplary embodiment of the invention includes one or more foreign language books that are read on an electronic display of a personal computer. English word references are available for each word in such books. The definitions of such words are derived from well-known foreign language dictionaries. With regard to the Japanese language, the system saves significant amounts of time and effort	Subject to §112 ¶ 6. Function (agreed): "selecting a discrete portion of an image of the source material" Structure: "a pointing device, such as a mouse and an electronic display of a computer and a computer" **Extrinsic Evidence:** Materials from prior Sentius litigations.

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		by eliminating the need for the user to look up Japanese characters in a Kanji dictionary."); 5:35-49 "A User interface **32** to the system includes an electronic viewer **43** that runs along with the system application program **42** and provides the following functional elements: index management **37**, user display **38**, a table of contents **39**, a pop-up display **40**, and a personal dictionary **41**. The electronic view module is used to view and read the electronic books provided with the language learning system. The module includes the following features: 1. One-click, pop-up information for all words containing foreign language words; 2. A word display palette; 3. A contents menu for each book; 4. Search functions; 5. Selectable browse and edit modes; and 6. The ability to copy words and associated information into personal dictionary." 6:48-67 ("FIG. 2 is a flow diagram in which the mechanism for indexing and linking text to external references is shown according to the invention. To find a reference to a particular word or	

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		other selected entry displayed on the screen, the user clicks the text that is viewed with a pointing device, such as a mouse (**200**). The click position is determined and used to calculate an offset value within the text (**200**). In the example shown in FIG. **2**, the user clicks at a particular location, e.g. horizontal and vertical coordinates **100** and **75**, respectively, and an offset value of **25** is returned. The offset value is compared to the start and end position indices stored in a look-up table (**201, 202**). The link between the selected text and the external reference is resolved (**203**), and the external reference is retrieved and displayed to the user (**204**). In the example of FIG. **2** an offset of **25** is located at the look-up table location having a start point of **20** and an end point of **27** and is linked to text located at position **200**. As can be seen from the look-up table (**202**), the link may be to text, sound, pictures, and video. In the example, the text linkage is to the English language word "Japanese economy"."); 7:40-49 ("The user interacts with the electronic book using a pointing device.	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		When the user "clicks" within the text image, the location of the pointer is determined. The location is converted into a position offset from the beginning of the text and used to determine which component word or phrase was selected. The process involves comparing the offset with the start and end values stored in the look-up table as discussed above in connection with FIG. **2.** When the offset value falls between a component's start and end points, a match is made and the external references can be resolved.") and 8:28-54 ("Using the Electronic Viewer Module The electronic viewer module provides the following pulldown menus: File, Edit, Words, View. The File Menu includes: 1. Open (opens up a book for reading); 2. Close (closes a book); 3. Personal Dictionary (opens the personal dictionary); 4. Import Words (imports a tab delineated file into the personal dictionary); 5. Export Words (exports a tab delineated file into the personal dictionary); and Quit (quits the applications). The Edit Menu Includes:	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		1. Undo (undoes a previously deleted entry in the personal dictionary fields); 2. Cut (cuts a highlighted block of text in the personal dictionary fields); 3. Copy (copies the selected text into the clipboard in either the electronic viewer module or the personal dictionary); and 4. Paste (pastes the copied text into the target field in the personal dictionary). The Words Menu includes: 1. Find (displays the search dialogue box); 2. Find Next (finds the next entry using the previously entered search word); 3. Next (goes to the next word in the personal dictionary based on the current sort setting); ") 9:36-38 "The arrow buttons move the location of the Word Pointer and update the reference information." EXTRINSIC EVIDENCE: *Sentius v. BlackBerry* Agreed Claim Construction Order, p. 2 ("Function: selecting a discrete portion of an image of the source material. Structure: an electronic viewer module of a computer and the pointing device and the electronic display of the computer, and equivalents thereof")	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		A Structure Editor for Abstract Document Objects, pp. 418, 412, and 430-435. ("A Structure Editor for Abstract Document Objects" by Gary Kimura (1986), is several decades old, and describes how common operating systems support document viewers and editors. It describes how objects are selected by their absolute or relative positions when opened, viewed and edited (See p 418). It also discloses how selection is done through use of keystrokes (p 422). Figure 16 describes the commonly used structure for these routine features in word processors and computer operating systems, with support for common editing and viewing operations (p 430- p 435) including type, move, copy, edit, delete, and other such commands on objects. It also explains the routine nature of display operations ("'Formatting and viewing a document for editing or reading involves mapping its abstract representation to a concrete representation (formatting) and then to a display (viewing). The functions described here are used for both editing and reading; they are two distinct functions:	

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		• Viewing or visiting an object. This involves creating windows on the screen that correspond to the structure of the document •Putting a concrete image inside each window. The content of a window either corresponds to the object's raw data or is the result of a formatting operation.") (p. 422).") Document Formatting Systems, pp. 419-420, 422, 432 and 444-449. ("Document Formatting Systems: Survey, Concepts and Issues", by Furuta et al (1982) surveys document editing and viewing systems available several decades ago and the routine support for typical operations from the operating systems and the editors. It discloses allocating, mapping and placing objects (p 420, p 447-449). ("Within the object model framework, we can consider the major operations of document processing as mappings from objects to objects. Editing operations are defined as mappings from either abstract to abstract objects or concrete to concrete objects. Conventional text editing operations map logical text objects to logical text objects; for example, a text insertion or deletion may be a mapping	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		from strings to strings or from paragraphs to paragraphs. Also, editing operations on an already formatted document produce concrete objects from concrete objects. An example of this type of editing is interactively inserting or deleting text from an already formatted paragraph, thereby mapping concrete paragraphs to concrete paragraphs; interactive layout operations such as moving formatted text, tables, or figures around a document are also in this category.") (p. 419)("The abstract document editor is a graphic version of the abstract object module and uses the window object module. The editor understands four classes of commands: structural viewing, content viewing, structural editing, and data editing.")(p. 432).") The Text Editor Sam, pp.6-8 and 18. ("The Text Editor Sam: by Rob Pike, the use of addresses and offsets are disclosed (See p 6-8). The use of the mouse for interactive editing for the typical operations, such a select, delete, cut and paste, etc. is also disclosed in Figure 2 and Figure 4, for instance. The routine use of pointers, offsets and addresses is also disclosed (See p 18).")	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		U.S. Patent Nos, 5,436,637 and 5,581,670. ("In US Patent 5,436,637, the use of standard operations such as cut, paste, open, copy, delete, is shown in Figure 6A-F (See also Col 2). Use of offsets and addresses is also disclosed (See Col 13)") ("The ability to convert bitmap positions to locations within the document data structures is disclosed in US Patent 5,581,670 (See Col 4 and Col 4). Typical operations such as cut & paste, delete and other selection operations are disclosed (See Col 33-36).") Emacs - Version 18.59 and VI- Version 3.0. ("Emacs -Version 18.59 (ftp://ftp.gnu.org/old-gnu/emacs/) and VI (VIM) Version 3.0 (ftp://ftp.vim.org/pub/vim/unix) are examples of two known visual editors that were capable, in conjunction with a processor's operating system, of opening a document and parsing, indexing and displaying its words during editing. These visual editors likewise could select a display location where user input was received and convert that display location into a	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		position or location within the document structure at which the edit should take place. Either of these visual editors would be a suitable base upon which programming could be added to achieve the claimed functionality of creating look-up table entries for certain words to be displayed in pop-up windows alongside the respective word when desired by a user.") **Declaration of V. Madisetti, ¶**60, 81, 99, and 110-112.	
"means for determining a display address of the selected discrete portion"	'633 patent: 17, 101	PROPOSED CONSTRUCTION: Function: determining a display address of the selected discrete portion Structure: a computer having a user interface and pointing device to obtain a click position of the pointing device to obtain horizontal and vertical coordinates to establish a position within text, and equivalents thereof INTRINSIC EVIDENCE: (S*ee*, User interface 32, user display 38, application program 42, data resource 34, offset index 35 and linked entities 36 of Fig. 1 together with mouse/position 200, look-up table 201/202, link 203 and display 204 of Fig. 2 of the '633 Patent	Subject to §112 ¶ 6. Function (agreed): "determining a display address of the selected discrete portion" Structure: None/indefinite **Extrinsic Evidence:** Materials from prior Sentius litigations. Declaration of Jon Weissman.

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		and algorithm described in the '633 Patent at Col. 5:26-43 ("The link engine **22** outputs the selected text to a word list **28** derived from the input text file **10** and/or audio/video information **14**, and also outputs the reference information **24**, consisting of linkable entities **25, 26, 27**, which are derived from the indexed database **12**. The indexor/viewer **29** creates a multi-media resource **30**, such as a file **33** that was processed as described above to produce a data resource **34**, an offset index **35**, and linked entities **36** to the data resource for access by the user. A user interface **32** to the system includes an electronic viewer **43** that runs along with the system application program **42** and provides the following functional elements: index management **37**, user display **38**, a table of contents **39**, a pop-up display 40, and a personal dictionary **41**. The electronic viewer module is used to view and read the electronic books provided with the language learning system. The module includes the following features: 1. One-Click, pop-up information for all words containing	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		foreign language words;"); 6:48-67, ("FIG. 2 is a flow diagram in which the mechanism for indexing and linking text to external references is shown according to the invention. To find a reference to a particular word or other selected entry displayed on the screen, the user clicks the text that is viewed with a pointing device, such as a mouse (**200**). The click position is determined and used to calculate an offset value within the text (**200**). In the example shown in FIG. **2**, the user clicks at a particular location, e.g. horizontal and vertical coordinates **100** and **75**, respectively, and an offset value of **25** is returned. The offset value is compared to the start and end position indices stored in a look-up table (**201, 202**). The link between the selected text and the external reference is resolved (**203**), and the external reference is retrieved and displayed to the user (**204**). In the example of FIG. **2** an offset of **25** is located at the look-up table location having a start point of **20** and an end point of **27** and is linked to text located at position **200**. As can be seen from the look-up table (**202**), the link	

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		may be to text, sound, pictures, and video. In the example, the text linkage is to the English language word "Japanese economy"."); 7:40-49 ("The user interacts with the electronic book using a pointing device. When the user "clicks" within the text image, the location of the pointer is determined. The location is converted into a position offset from the beginning of the text and used to determine which component word or phrase was selected. The process involves comparing the offset with the start and end values stored in the look-up table as discussed above in connection with FIG. **2.** When the offset value falls between a component's start and end points, a match is made and the external references can be resolved.") and 8:28-9:6 ("Using the Electronic Viewer Module The electronic viewer module provides the following pulldown menus: File, Edit, Words, View. The File Menu includes: 1. Open (opens up a book for reading); 2. Close (closes a book); 3. Personal	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		Dictionary (opens the personal dictionary); 4. Import Words (imports a tab delineated file into the personal dictionary); 5. Export Words (exports a tab delineated file into the personal dictionary); and Quit (quits the applications). The Edit Menu Includes: 1. Undo (undoes a previously deleted entry in the personal dictionary fields); 2. Cut (cuts a highlighted block of text in the personal dictionary fields); 3. Copy (copies the selected text into the clipboard in either the electronic viewer module or the personal dictionary); and 4. Paste (pastes the copied text into the target field in the personal dictionary). The Words Menu includes: 1. Find (displays the search dialogue box); 2. Find Next (finds the next entry using the previously entered search word); 3. Next (goes to the next word in the personal dictionary based on the current sort setting); 4. Prey (goes to the previous word in the personal dictionary basic based on the current sort setting); 5. Jump to Text (umps from the personal dictionary to the source of the word in the original text); and 6. Flash Words (displays the words	

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		in the personal dictionary in slide show fashion). The View Menu includes: 1. Browse (sets the program to Browse Mode, indicated by the arrow cursor); 2. Edit (sets the program to Edit Mode, indicated by the I-beam cursor); 3. Show Note Guides (displays the location of the Notes in the text of the viewer); 4. Show Notes (displays the Notes field in the personal dictionary); 5. Show Info (displays the Word Information and sort control button in the personal dictionary); and 6. Show Palette (displays the Word Display Palette with the electronic viewer module)." EXTRINSIC EVIDENCE*:* *Sentius v. BlackBerry* Agreed Claim Construction Order, p.4 ("Function: determining a display address of the selected discrete portion. Structure: a computer having a user interface and pointing device to obtain a click position of the pointing device to obtain horizontal and vertical coordinates to establish a position within text, and equivalents thereof ('731 patent at 7:40-45; 6:49-55)")	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		Sentius v Flyswat Claim Construction Order, p. 37 ("Determining the address of said selected discrete portion" means determining the pixel location or screen coordinates of the selected discrete portion of the source material image which the user has selected on the display.") Document Formatting Systems, pp. 419-420, 422, 432 and 444-449. ("Document Formatting Systems: Survey, Concepts and Issues", by Furuta et al (1982) surveys document editing and viewing systems available several decades ago and the routine support for typical operations from the operating systems and the editors. It discloses allocating, mapping and placing objects (p 420, p 447-449). ("Within the object model framework, we can consider the major operations of document processing as mappings from objects to objects. Editing operations are defined as mappings from either abstract to abstract objects or concrete to concrete objects. Conventional text editing operations map logical text objects to logical text objects; for example, a text insertion or deletion may be a mapping from strings to strings or from paragraphs to paragraphs. Also, editing operations on an already formatted document produce concrete objects from concrete objects. An example of this	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		type of editing is interactively inserting or deleting text from an already formatted paragraph, thereby mapping concrete paragraphs to concrete paragraphs; interactive layout operations such as moving formatted text, tables, or figures around a document are also in this category.") (p. 419)("The abstract document editor is a graphic version of the abstract object module and uses the window object module. The editor understands four classes of commands: structural viewing, content viewing, structural editing, and data editing.")(p. 432).") The Text Editor Sam, pp.6-8 and 18. ("The Text Editor Sam: by Rob Pike, the use of addresses and offsets are disclosed (See p 6-8). The use of the mouse for interactive editing for the typical operations, such a select, delete, cut and paste, etc. is also disclosed in Figure 2 and Figure 4, for instance. The routine use of pointers, offsets and addresses is also disclosed (See p 18).") Emacs - Version 18.59 and VI- Version 3.0. ("Emacs -Version 18.59 (ftp://ftp.gnu.org/old-gnu/emacs/) and VI (VIM) Version 3.0 (ftp://ftp.vim.org/pub/vim/unix) are	

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		examples of two known visual editors that were capable, in conjunction with a processor's operating system, of opening a document and parsing, indexing and displaying its words during editing. These visual editors likewise could select a display location where user input was received and convert that display location into a position or location within the document structure at which the edit should take place. Either of these visual editors would be a suitable base upon which programming could be added to achieve the claimed functionality of creating look-up table entries for certain words to be displayed in pop-up windows alongside the respective word when desired by a user.") **Declaration of V. Madisetti, ¶**60, 80-85, and 117	
"means for selecting one of the external reference materials corresponding to the identified one of the plurality of discrete pieces" / "means for selecting one of the at least one of the	'633 patent: 17/101	PROPOSED CONSTRUCTION: Function: **s**electing one of the plurality of external reference materials corresponding to the identified one of the plurality of discrete pieces Structure: a computer having a visual editor programmed to use the offset	Subject to §112 ¶ 6. Function (agreed): "selecting one of the external reference materials corresponding to the identified one of the plurality of discrete pieces" / "selecting one of the at least one of the plurality of external reference materials

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
plurality of external reference materials corresponding to the identified one of the plurality of discrete pieces"		value to resolve the linking information to identify a corresponding external reference material, and equivalents thereof INTRINSIC EVIDENCE: ('633 Patent, Col. 6:39-64 ("In the new format of the present system, every word or sound, for example, can be linked to information not contained within the text using an indexing method that maps a single word or phrase to a table that contains external reference material. This reference can be in the form [or] *of* text, graphics, images, movies, and/or sound. Thus, the resource, materials, such as the text, remains unaltered and therefore compact in terms of file size. Thus, the resource materials, for example the text, takes up less disk space and runs faster. FIG. 2 is a flow diagram in which the mechanism for indexing and linking text to external references is shown according to the invention. To find a reference to a particular word or other selected entry displayed on the screen, the user clicks the text that is viewed with a pointing device, such as a mouse (**200**). The click position is determined and used to calculate an offset value within the text	corresponding to the identified one of the plurality of discrete pieces" Structure: "a computer programmed to use the look-up table to identify a link to corresponding external reference material based on the identified discrete piece, and to resolve the link and retrieve the external reference material, and equivalents thereof" **Intrinsic Evidence** 6:48-67 **Extrinsic Evidence:** Materials from prior Sentius litigations.

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		(**200**). In the example shown in FIG. **2**, the user clicks at a particular location, e.g. horizontal and vertical coordinates **100** and **75**, respectively, and an offset value of **25** is returned. The offset value is compared to the start and end position indices stored in a look-up table (**201, 202**). The link between the selected text and the external reference is resolved (**203**), and the external reference is retrieved and displayed to the user **(204)**. In the example of FIG. **2** an offset of **25** is located at the look-up table location having a start point of **20** and an end point of **27** and is linked to text located at position 200."); 7:14 to 8:15 ("The linking process takes the text after the word cut process and links it to an external reference. The database **20** sources a grammar parser **23** and a link engine **22** that builds an index **21** which, in turn, locates each textual and audio/video reference in the source material. In the case of language learning, the component words and phrases are linked to a foreign language dictionary. In other cases, links may be made to other reference materials, such as graphics and/or sound. Compilation. After linking, the text and references are	

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		compiled. During compilation, the cut text is reassembled to create an image of the text that the end user sees. At this point additional formatting may be applied to the text for final display. Indices of the component words and phrases are built with links to the reference material and duplicate references are consolidated to conserve memory and storage requirements. A key feature of the system format is the method by which the original book text is indexed and linked with the external references. During the compile process an image of the text is created. When the image is created, the cuts are indexed based upon the position offset from the beginning of the text. The start and end points of the cut text are recorded in a look-up table along with the links to external references. The number and type of links for any component is dynamic. This means that a single entry could have several different references attached to it, each containing different forms of data. The user interacts with the electronic book using a pointing device. When the user "clicks" within the text image, the location of the pointer is determined.	

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		The location is converted into a position offset from the beginning of the text and used to determine which component word or phrase was selected. The process involves comparing the offset with the start and end values stored in the look-up table as discussed above in connection with FIG. **2.** When the offset value falls between a component's start and end points, a match is made and the external references can be resolved. English Reference FIG. 3 is a screen display showing a highlighted Japanese word and a pop-up menu, including a translation of the Japanese word, according to the invention. The following section explains the English reference pop-ups associated with each word: The English reference is intended to give the user basic information to help him understand a selected word in its context. A majority of the word definitions found in the English reference are not the direct translation of the word in that particular context. They are mostly generalized definitions of the given word. These pop-up fields give the user a quick reference to the word and allow him to continue reading or	

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		reviewing the text without the need to stop and access a dictionary. In applying the invention to other languages, for example Korean or Chinese, or to difficult materials, such as highly technical or complex matters, appropriate external references should be selected. In the exemplary embodiment of the invention, a priority is placed on making the text readable, rather than on creating a detailed grammatical description of it. The English reference is not considered a direct translation of the foreign language, but rather is preferably a contextual definition based upon the word's meaning within the text. Definitions Definitions in dictionaries are written for practical use. Accordingly, word and sentence translations are preferably written in modem English at a level acceptable to native speakers. The types of phrases and words covered by the English reference are preferably of great variety. The English translation should therefore be highly readable and useful. (and Figs. 1, 2 and 3) (*See,* User interface 32, pop-up display 40, application program 42 and table	

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		202 of Fig. 2 together with mouse/position 200, look-up table 201/202, link 203 and display 204 of Fig. 2 of the '633 Patent and algorithm described at Col. 5:26-39 ("The link engine **22** outputs the selected text to a word list **28** derived from the input text file **10** and/or audio/video information **14**, and also outputs the reference information **24**, consisting of linkable entities **25, 26, 27**, which are derived from the indexed database **12**. The indexor/viewer **29** creates a multi-media resource **30**, such as a file **33** that was processed as described above to produce a data resource **34**, an offset index **35**, and linked entities **36** to the data resource for access by the user. A user interface **32** to the system includes an electronic viewer **43** that runs along with the system application program **42** and provides the following functional elements: index management **37**, user display **38**, a table of contents **39**, a pop-up display 40, and a personal dictionary **41**."); EXTRINSIC EVIDENCE: *Sentius v. BlackBerry* Agreed Claim Construction Order, p.4 ("Function:	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		selecting one of the plurality of external reference materials corresponding to the identified one of the plurality of discrete pieces. Structure: a computer having a visual editor programmed to use the offset value to resolve the linking information to identify a corresponding external reference material, and equivalents thereof ('731 patent at 6:46-65)") Document Image Understanding: Geometric and Logical Layout, pp. 386-389. ("Document Image Understanding: Geometric and Logical Layout" by Robert Haralick 1994), describes how technical documents are opened and loaded into word processor software so that its structure may be determined, and the document may be cut/parsed into its logical discrete pieces; e.g., text (words and phrases) and non-text (images), portions, through steps such as segmentation. Refer to Page 386, Col. 1; Page 386, Col. 2; Page 387, Col. 1; Page 389, Col. 1.") A Structure Editor for Abstract Document Objects, pp. 418, 412, and 430-435. ("A Structure Editor for Abstract Document Objects" by Gary	

U.S. PATENT NO. RE 43,633			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		Kimura (1986), is several decades old, and describes how common operating systems support document viewers and editors. It describes how objects are selected by their absolute or relative positions when opened, viewed and edited (See p 418). It also discloses how selection is done through use of keystrokes (p 422). Figure 16 describes the commonly used structure for these routine features in word processors and computer operating systems, with support for common editing and viewing operations (p 430- p 435) including type, move, copy, edit, delete, and other such commands on objects. It also explains the routine nature of display operations ("'Formatting and viewing a document for editing or reading involves mapping its abstract representation to a concrete representation (formatting) and then to a display (viewing). The functions described here are used for both editing and reading; they are two distinct functions: • Viewing or visiting an object. This involves creating windows on the screen that correspond to the structure of the document	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		•Putting a concrete image inside each window. The content of a window either corresponds to the object's raw data or is the result of a formatting operation.") (p. 422).") Document Formatting Systems, pp. 419-420, 422, 432 and 444-449. ("Document Formatting Systems: Survey, Concepts and Issues", by Furuta et al (1982) surveys document editing and viewing systems available several decades ago and the routine support for typical operations from the operating systems and the editors. It discloses allocating, mapping and placing objects (p 420, p 447-449). ("Within the object model framework, we can consider the major operations of document processing as mappings from objects to objects. Editing operations are defined as mappings from either abstract to abstract objects or concrete to concrete objects. Conventional text editing operations map logical text objects to logical text objects; for example, a text insertion or deletion may be a mapping from strings to strings or from paragraphs to paragraphs. Also, editing operations on an already formatted document produce concrete objects from	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		concrete objects. An example of this type of editing is interactively inserting or deleting text from an already formatted paragraph, thereby mapping concrete paragraphs to concrete paragraphs; interactive layout operations such as moving formatted text, tables, or figures around a document are also in this category.") (p. 419)("The abstract document editor is a graphic version of the abstract object module and uses the window object module. The editor understands four classes of commands: structural viewing, content viewing, structural editing, and data editing.")(p. 432).") Ten Years of Window Systems, pp. 35-37. ("Ten Years of Window Systems – A Retrospective View" by Warren Teitelman, discloses how window systems and languages such as Smalltalk directly supported "cut and paste", and how text could be selected and inserted through use of inbuilt commands (p 36). Also disclosed is the use of address spaces in Smalltalk 76 and Smalltalk 1980.") The Text Editor Sam, pp.6-8 and 18. ("The Text Editor Sam: by Rob Pike, the use of addresses and offsets are	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		disclosed (See p 6-8). The use of the mouse for interactive editing for the typical operations, such a select, delete, cut and paste, etc. is also disclosed in Figure 2 and Figure 4, for instance. The routine use of pointers, offsets and addresses is also disclosed (See p 18).") U.S. Patent Nos, 5,436,637 and 5,581,670. ("In US Patent 5,436,637, the use of standard operations such as cut, paste, open, copy, delete, is shown in Figure 6A-F (See also Col 2). Use of offsets and addresses is also disclosed (See Col 13)") ("The ability to convert bitmap positions to locations within the document data structures is disclosed in US Patent 5,581,670 (See Col 4 and Col 4). Typical operations such as cut & paste, delete and other selection operations are disclosed (See Col 33-36).") Emacs - Version 18.59 and VI- Version 3.0. ("Emacs -Version 18.59 (ftp://ftp.gnu.org/old-gnu/emacs/) and VI (VIM) Version 3.0 (ftp://ftp.vim.org/pub/vim/unix) are examples of two known visual editors that were capable, in conjunction with a	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		processor's operating system, of opening a document and parsing, indexing and displaying its words during editing. These visual editors likewise could select a display location where user input was received and convert that display location into a position or location within the document structure at which the edit should take place. Either of these visual editors would be a suitable base upon which programming could be added to achieve the claimed functionality of creating look-up table entries for certain words to be displayed in pop-up windows alongside the respective word when desired by a user.") **Declaration of V. Madisetti, ¶**35, 76, 99-102, and 103-110.	
"means for displaying on a computer the selected one of the external reference materials" / "means for displaying on a computer the selected one of the plurality of external reference materials"	'633 patent: 17, 101	PROPOSED CONSTRUCTION: Function: displaying the retrieved external reference material Structure: "a computer with a display driver and electronic display" INTRINSIC EVIDENCE: ('633 Patent, 4:14-16 ("The exemplary embodiment of the invention includes one or more foreign language books that	Subject to §112 ¶ 6. Function: "displaying on a computer the selected one of the external reference materials" / "displaying on a computer the selected one of the plurality of external reference materials"

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		are read on an electronic display of a personal computer."); 4:26-29 ("In the same pop-up window, the system provides an English reference to any word that is also selected by clicking on the selected word or phrase."); 5:34-49 ("A user interface **32** to the system includes an electronic viewer **43** that runs along with the system application program 42 and provides the following functional elements: index management **37**, user display **38**, a table of contents **39**, a pop-up display **40**, and a personal dictionary **41**. The electronic viewer module is used to view and read the electronic books provided with the language learning system. The module includes the following features: 1. One-click, pop-up information for all words containing foreign language words; 2. A word display palette; 3. A contents menu for each book; 4. Search functions; 5. Selectable browse and edit modes; and 6. The ability to copy words and associated information into personal	Structure: "a computer with a display driver and electronic display of a computer"

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		dictionary.:); Abstract; 6:50-53 ("To find a reference to a particular word or other selected entry displayed on the screen, the user clicks the text that is viewed with a pointing device, such as a mouse **(200)**"); 7:23-25 ("After linking, the text and references are compiled. During compilation, the cut text is reassembled to create an image of the text that the end user sees.") 7:32-34 ("During the compile process an image of the text is created. When the image is created, the cuts are indexed based upon the position offset from the beginning of the text."); 7:51-53 (FIG. 3 is a screen display showing a highlighted Japanese word and a pop-up menu, including a translation of the Japanese word, according to the invention."); 8:15-18 ("FIG. **4** is a screen display showing a highlighted Japanese word and a pop-up menu, including Japanese	

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		language annotations of the Japanese word, according to the invention. Hyper notes are provided for a great number of words and phrases included in the system."); and Figures 1, 3, 4 and 5 of the '633 Patent) 9:48-60 ("Using the Personal Dictionary Module FIG. **5** is a screen display showing a Japanese word listed in a personal dictionary, as well as a personal dictionary control panel, according to the invention. The personal dictionary module in the exemplary embodiment of the invention is implemented in a relational database that is optimized for managing and studying words. Unlike electronic dictionaries where only the word entries of the dictionary are searchable, the personal dictionary module allows a user to search on each of the eight or more keys associated with a word, as discussed above. To open the personal dictionary, the user selects Personal Dictionary from the File menu or double clicks on a Personal Dictionary icon.") EXTRINSIC EVIDENCE:	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		Sentius v. BlackBerry Agreed Claim Construction Order, p.3 ("Function: displaying the retrieved external reference material Structure: an electronic viewer module of a computer and the electronic display of the computer, and equivalents thereof") **Declaration of V. Madisetti** ¶60, 117-123.	
"means for indexing the plurality of discrete pieces and corresponding links to the external reference materials" / "means for indexing at least one of the plurality of discrete pieces and corresponding links to the plurality of external reference materials"	'633 patent: 19, 103	PROPOSED CONSTRUCTION: Function: (Agreed) "indexing the plurality of discrete pieces and corresponding links to the external reference materials" / "indexing at least one of the plurality of discrete pieces and corresponding links to the plurality of external reference materials Structure: "a computer having a visual editor, grammar parser and link engine programmed to build an index which index provides locations for discrete pieces and corresponding links to external reference materials, and equivalents thereof	Subject to §112 ¶ 6. Function: "indexing the plurality of discrete pieces and corresponding links to the external reference materials" / "indexing at least one of the plurality of discrete pieces and corresponding links to the plurality of external reference materials" Structure: None/indefinite **Extrinsic Evidence:** Materials from prior Sentius litigations. Declaration of Jon Weissman.

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		INTRINSIC EVIDENCE: '633 Patent and Figures 1 and 2; 5:19-38 ("The database sources a grammar parser **23** and a link engine **22** that builds an index **21** which, **20** in turn, locates each textual and audio/video reference in the source material. The index provides a location for each reference in a database **12** that includes a relational database engine **15**, and linkable entities, such as text references **16**, audio references **17**, graphic references, and the like. The link engine **22** outputs the selected text to a word list **28** derived from the input text file **10** and/or audio/video information **14**, and also outputs the reference information **24**, consisting of linkable entities **25, 26, 27**, which are derived from the indexed database **12**. The indexor/viewer **29** creates a multi-media resource **30**, such as a file **33** that was processed as described above to produce a data resource **34**, an offset index **35**, and linked entities **36** to the data resource for access by the user. A user interface **32** to the system includes an electronic viewer 43 that runs along with the system application program **42** and provides the following	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		functional elements: index management **37**, user display **38**, a table of contents **39**, a pop-up display **40**, and a personal dictionary **41**."); 7:1-49 ("The actual indexing process is completed in several steps, including word cuts, linking, and compilation. Word Cuts. The word cutting process is accomplished using a simple visual editor, for example a point and click system using a pointing device, such as a mouse. The process divides the text into the individual components of text that are linked with the additional reference material. The original text is provided by a publisher in electronic form in a raw binary text format (e.g. an ASCII text file or other word processor file). This text is then divided up into the component word or phrases in preparation for the next step. Linking. The linking process takes the text after the word cut process and links it to an external reference. The database **20** sources a grammar parser **23** and a link engine **22** that builds an index **21** which, in turn, locates each textual and audio/video reference in the source material. In the case of language learning, the component words and	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		phrases are linked to a foreign language dictionary. In other cases, links may be made to other reference materials, such as graphics and/or sound. Compilation. After linking, the text and references are compiled. During compilation, the cut text is reassembled to create an image of the text that the end user sees. At this point additional formatting may be applied to the text for final display. Indices of the component words and phrases are built with links to the reference material and duplicate references are consolidated to conserve memory and storage requirements. A key feature of the system format is the method by which the original book text is indexed and linked with the external references. During the compile process an image of the text is created. When the image is created, the cuts are indexed based upon the position offset from the beginning of the text. The start and end points of the cut text are recorded in a look-up table along with the links to external references. The number and type of links for any component is dynamic. This means that a single entry could have several different references attached to it, each	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		containing different forms of data. The user interacts with the electronic book using a pointing device. When the user "clicks" within the text image, the location of the pointer is determined. The location is converted into a position offset from the beginning of the text and used to determine which component word or phrase was selected. The process involves comparing the offset with the start and end values stored in the look-up table as discussed above in connection with FIG. **2.** When the offset value falls between a component's start and end points, a match is made and the external references can be resolved.") EXTRINSIC EVIDENCE: Document Image Understanding: Geometric and Logical Layout, pp. 386-389. ("Document Image Understanding: Geometric and Logical Layout" by Robert Haralick 1994), describes how technical documents are opened and loaded into word processor software so that its structure may be determined, and the document may be cut/parsed into its logical discrete pieces; e.g., text (words and phrases) and non-text (images), portions, through	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		steps such as segmentation. Refer to Page 386, Col. 1; Page 386, Col. 2; Page 387, Col. 1; Page 389, Col. 1.") A Structure Editor for Abstract Document Objects, pp. 418, 412, and 430-435. ("A Structure Editor for Abstract Document Objects" by Gary Kimura (1986), is several decades old, and describes how common operating systems support document viewers and editors. It describes how objects are selected by their absolute or relative positions when opened, viewed and edited (See p 418). It also discloses how selection is done through use of keystrokes (p 422). Figure 16 describes the commonly used structure for these routine features in word processors and computer operating systems, with support for common editing and viewing operations (p 430- p 435) including type, move, copy, edit, delete, and other such commands on objects. It also explains the routine nature of display operations ("'Formatting and viewing a document for editing or reading involves mapping its abstract representation to a concrete representation (formatting) and then to a	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		display (viewing). The functions described here are used for both editing and reading; they are two distinct functions: • Viewing or visiting an object. This involves creating windows on the screen that correspond to the structure of the document •Putting a concrete image inside each window. The content of a window either corresponds to the object's raw data or is the result of a formatting operation.") (p. 422).") Document Formatting Systems, pp. 419-420, 422, 432 and 444-449. ("Document Formatting Systems: Survey, Concepts and Issues", by Furuta et al (1982) surveys document editing and viewing systems available several decades ago and the routine support for typical operations from the operating systems and the editors. It discloses allocating, mapping and placing objects (p 420, p 447-449). ("Within the object model framework, we can consider the major operations of document processing as mappings from objects to objects. Editing operations are defined as mappings from either abstract to abstract objects or concrete to concrete	

U.S. PATENT NO. RE 43,633			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		objects. Conventional text editing operations map logical text objects to logical text objects; for example, a text insertion or deletion may be a mapping from strings to strings or from paragraphs to paragraphs. Also, editing operations on an already formatted document produce concrete objects from concrete objects. An example of this type of editing is interactively inserting or deleting text from an already formatted paragraph, thereby mapping concrete paragraphs to concrete paragraphs; interactive layout operations such as moving formatted text, tables, or figures around a document are also in this category.") (p. 419)("The abstract document editor is a graphic version of the abstract object module and uses the window object module. The editor understands four classes of commands: structural viewing, content viewing, structural editing, and data editing.")(p. 432).") Ten Years of Window Systems, pp. 35-37. ("Ten Years of Window Systems – A Retrospective View" by Warren Teitelman, discloses how window systems and languages such as Smalltalk directly supported "cut and	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		paste", and how text could be selected and inserted through use of inbuilt commands (p 36). Also disclosed is the use of address spaces in Smalltalk 76 and Smalltalk 1980.") The Text Editor Sam, pp.6-8 and 18. ("The Text Editor Sam: by Rob Pike, the use of addresses and offsets are disclosed (See p 6-8). The use of the mouse for interactive editing for the typical operations, such a select, delete, cut and paste, etc. is also disclosed in Figure 2 and Figure 4, for instance. The routine use of pointers, offsets and addresses is also disclosed (See p 18).") U.S. Patent Nos, 5,436,637 and 5,581,670. ("In US Patent 5,436,637, the use of standard operations such as cut, paste, open, copy, delete, is shown in Figure 6A-F (See also Col 2). Use of offsets and addresses is also disclosed (See Col 13)") ("The ability to convert bitmap positions to locations within the document data structures is disclosed in US Patent 5,581,670 (See Col 4 and Col 4). Typical operations such as cut & paste, delete and other selection operations are disclosed (See Col 33-36).")	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		Emacs - Version 18.59 and VI- Version 3.0. ("Emacs -Version 18.59 (ftp://ftp.gnu.org/old-gnu/emacs/) and VI (VIM) Version 3.0 (ftp://ftp.vim.org/pub/vim/unix) are examples of two known visual editors that were capable, in conjunction with a processor's operating system, of opening a document and parsing, indexing and displaying its words during editing. These visual editors likewise could select a display location where user input was received and convert that display location into a position or location within the document structure at which the edit should take place. Either of these visual editors would be a suitable base upon which programming could be added to achieve the claimed functionality of creating look-up table entries for certain words to be displayed in pop-up windows alongside the respective word when desired by a user.") **Declaration of V. Madisetti, ¶** 35, 76, 99-102, and 103-110.	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
"means for building an index for each of the linked external reference materials" / "means for building an index for each of the linked plurality of external reference materials"	'633 patent: 20, 104	PROPOSED CONSTRUCTION: Function: "building an index for each of the linked external reference materials" Structure: "a computer having a visual editor, grammar parser and link engine programmed to build an index to linked external reference materials, and equivalents thereof" INTRINSIC EVIDENCE: '633 Patent and Figures 1 and 2 and 5:19-38 ("The database sources a grammar parser **23** and a link engine **22** that builds an index **21** which, **20** in turn, locates each textual and audio/video reference in the source material. The index provides a location for each reference in a database **12** that includes a relational database engine **15**, and linkable entities, such as text references **16**, audio references **17**, graphic references, and the like. The link engine **22** outputs the selected text to a word list **28** derived from the input text file **10** and/or audio/video information **14**, and also outputs the reference information **24**, consisting of linkable entities **25, 26, 27**, which are derived from the indexed database **12**. The indexor/viewer **29** creates a multi-	Subject to §112 ¶ 6. Function: "building an index for each of the linked external reference materials" Structure: None/indefinite **Extrinsic Evidence:** Materials from prior Sentius litigations. Declaration of Jon Weissman.

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		media resource **30**, such as a file **33** that was processed as described above to produce a data resource **34**, an offset index **35**, and linked entities **36** to the data resource for access by the user. A user interface **32** to the system includes an electronic viewer 43 that runs along with the system application program **42** and provides the following functional elements: index management **37**, user display **38**, a table of contents **39**, a pop-up display **40**, and a personal dictionary **41**."); 7:1-49 ("The actual indexing process is completed in several steps, including word cuts, linking, and compilation. Word Cuts. The word cutting process is accomplished using a simple visual editor, for example a point and click system using a pointing device, such as a mouse. The process divides the text into the individual components of text that are linked with the additional reference material. The original text is provided by a publisher in electronic form in a raw binary text format (e.g. an ASCII text file or other word processor file). This text is then divided up into the component word or phrases in	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		preparation for the next step. Linking. The linking process takes the text after the word cut process and links it to an external reference. The database **20** sources a grammar parser **23** and a link engine **22** that builds an index **21** which, in turn, locates each textual and audio/video reference in the source material. In the case of language learning, the component words and phrases are linked to a foreign language dictionary. In other cases, links may be made to other reference materials, such as graphics and/or sound. Compilation. After linking, the text and references are compiled. During compilation, the cut text is reassembled to create an image of the text that the end user sees. At this point additional formatting may be applied to the text for final display. Indices of the component words and phrases are built with links to the reference material and duplicate references are consolidated to conserve memory and storage requirements. A key feature of the system format is the method by which the original book text is indexed and linked with the external references. During the compile process an image of the text is created. When	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		the image is created, the cuts are indexed based upon the position offset from the beginning of the text. The start and end points of the cut text are recorded in a look-up table along with the links to external references. The number and type of links for any component is dynamic. This means that a single entry could have several different references attached to it, each containing different forms of data. The user interacts with the electronic book using a pointing device. When the user "clicks" within the text image, the location of the pointer is determined. The location is converted into a position offset from the beginning of the text and used to determine which component word or phrase was selected. The process involves comparing the offset with the start and end values stored in the look-up table as discussed above in connection with FIG. **2.** When the offset value falls between a component's start and end points, a match is made and the external references can be resolved.") EXTRINSIC EVIDENCE: Document Image Understanding: Geometric and Logical Layout, pp. 386-	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		389. ("Document Image Understanding: Geometric and Logical Layout" by Robert Haralick 1994), describes how technical documents are opened and loaded into word processor software so that its structure may be determined, and the document may be cut/parsed into its logical discrete pieces; e.g., text (words and phrases) and non-text (images), portions, through steps such as segmentation. Refer to Page 386, Col. 1; Page 386, Col. 2; Page 387, Col. 1; Page 389, Col. 1.") A Structure Editor for Abstract Document Objects, pp. 418, 412, and 430-435. ("A Structure Editor for Abstract Document Objects" by Gary Kimura (1986), is several decades old, and describes how common operating systems support document viewers and editors. It describes how objects are selected by their absolute or relative positions when opened, viewed and edited (See p 418). It also discloses how selection is done through use of keystrokes (p 422). Figure 16 describes the commonly used structure for these routine features in word processors and computer operating systems, with	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		support for common editing and viewing operations (p 430- p 435) including type, move, copy, edit, delete, and other such commands on objects. It also explains the routine nature of display operations ("'Formatting and viewing a document for editing or reading involves mapping its abstract representation to a concrete representation (formatting) and then to a display (viewing). The functions described here are used for both editing and reading; they are two distinct functions: • Viewing or visiting an object. This involves creating windows on the screen that correspond to the structure of the document •Putting a concrete image inside each window. The content of a window either corresponds to the object's raw data or is the result of a formatting operation.") (p. 422).") Document Formatting Systems, pp. 419-420, 422, 432 and 444-449. ("Document Formatting Systems: Survey, Concepts and Issues", by Furuta et al (1982) surveys document editing and viewing systems available several decades ago and the routine support for typical	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		operations from the operating systems and the editors. It discloses allocating, mapping and placing objects (p 420, p 447-449). ("Within the object model framework, we can consider the major operations of document processing as mappings from objects to objects. Editing operations are defined as mappings from either abstract to abstract objects or concrete to concrete objects. Conventional text editing operations map logical text objects to logical text objects; for example, a text insertion or deletion may be a mapping from strings to strings or from paragraphs to paragraphs. Also, editing operations on an already formatted document produce concrete objects from concrete objects. An example of this type of editing is interactively inserting or deleting text from an already formatted paragraph, thereby mapping concrete paragraphs to concrete paragraphs; interactive layout operations such as moving formatted text, tables, or figures around a document are also in this category.") (p. 419)("The abstract document editor is a graphic version of the abstract object module and uses the window object module. The editor	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		understands four classes of commands: structural viewing, content viewing, structural editing, and data editing.")(p. 432).") Ten Years of Window Systems, pp. 35-37. ("Ten Years of Window Systems – A Retrospective View" by Warren Teitelman, discloses how window systems and languages such as Smalltalk directly supported "cut and paste", and how text could be selected and inserted through use of inbuilt commands (p 36). Also disclosed is the use of address spaces in Smalltalk 76 and Smalltalk 1980.") The Text Editor Sam, pp.6-8 and 18. ("The Text Editor Sam: by Rob Pike, the use of addresses and offsets are disclosed (See p 6-8). The use of the mouse for interactive editing for the typical operations, such a select, delete, cut and paste, etc. is also disclosed in Figure 2 and Figure 4, for instance. The routine use of pointers, offsets and addresses is also disclosed (See p 18).") U.S. Patent Nos, 5,436,637 and 5,581,670. ("In US Patent 5,436,637, the use of standard operations such as cut, paste, open, copy, delete, is shown	

U.S. PATENT NO. RE 43,633			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		in Figure 6A-F (See also Col 2). Use of offsets and addresses is also disclosed (See Col 13)") ("The ability to convert bitmap positions to locations within the document data structures is disclosed in US Patent 5,581,670 (See Col 4 and Col 4). Typical operations such as cut & paste, delete and other selection operations are disclosed (See Col 33-36).") Emacs - Version 18.59 and VI- Version 3.0. ("Emacs -Version 18.59 (ftp://ftp.gnu.org/old-gnu/emacs/) and VI (VIM) Version 3.0 (ftp://ftp.vim.org/pub/vim/unix) are examples of two known visual editors that were capable, in conjunction with a processor's operating system, of opening a document and parsing, indexing and displaying its words during editing. These visual editors likewise could select a display location where user input was received and convert that display location into a position or location within the document structure at which the edit should take place. Either of these visual editors would be a suitable base upon which programming could be added to achieve	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		the claimed functionality of creating look-up table entries for certain words to be displayed in pop-up windows alongside the respective word when desired by a user.") **Declaration of V. Madisetti, ¶**25-28, and 31-37.	
"…cutting the textual source material into a plurality of discrete pieces is done automatically"	'633 patent: 25, 109	PROPOSED CONSTRUCTION: Function: cutting the textual source material into a plurality of discrete pieces Structure: "a computer having a visual editor and grammar parser that are utilized to identify words or phrases, and equivalents thereof" INTRINSIC EVIDENCE: (*See* visual editor 19 and grammar parser 23 of Fig. 1 and algorithm described in Figures 1 and 2 and '633 Patent Col. 5:12-25 ("FIG. **1** is a block schematic diagram of an exemplary embodiment of the invention that implements a language learning system. An electronic book and/or a multi-media source material is provided as a teaching resource. A text file **10** and/or a multimedia source **14**, consisting of an audio/video file **11** and synchronized	Subject to §112 ¶ 6. Function: "cutting the textual source material into a plurality of discrete pieces is done automatically" Structure: None/indefinite **Extrinsic Evidence:** Materials from prior Sentius litigations. Declaration of Jon Weissman.

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		text **13**, which may include sound, images, and/or video is edited during construction of a linked text database by a visual editor **19** that used to build a wordified database **20**. The database sources a grammar parser **23** and a link engine **22** that builds an index **21** which, **20** in turn, locates each textual and audio/video reference in the source material. The index provides a location for each reference in a database **12** that includes a relational database engine **15**, and linkable entities, such as text references **16**, audio references **17**, graphic references **18**, and the like."); 7:1-21 ("The actual indexing process is completed in several steps, including word cuts, linking, and compilation. Word Cuts. The word cutting process is accomplished using a simple visual editor, for example a point and click system using a pointing device, such as a mouse. The process divides the text into the individual components of text that are linked with the additional reference material. The original text is provided by a publisher in electronic form in a raw binary text format (e.g. an ASCII text file or other word processor file). This text is then divided up into	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		the component word or phrases in preparation for the next step. Linking. The linking process takes the text after the word cut process and links it to an external reference. The database **20** sources a grammar parser **23** and a link engine **22** that builds an index **21** which, in turn, locates each textual and audio/video reference in the source material. In the case of language learning, the component words and phrases are linked to a foreign language dictionary. In other cases, links may be made to other reference materials, such as graphics and/or sound."); 8:29-33 ("The electronic viewer module provides the following pulldown menus: File, Edit, Words, View. The File Menu includes: 1. Open (opens up a book for reading); 2. Close (closes a book)"); and 8:39-48 ("The Edit Menu Includes: 1. Undo (undoes a previously deleted entry in the personal dictionary fields); 2. Cut (cuts a highlighted block of text in the personal dictionary fields); 3. Copy (copies the selected text into the clipboard in either the electronic viewer module or the personal dictionary); and 4. Paste (pastes the copied text into the	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		target field in the personal dictionary)").of the '633 Patent) EXTRINSIC EVIDENCE: *Sentius v. BlackBerry* Agreed Claim Construction Order, p.3, ("Function: cutting the textual source material into a plurality of discrete pieces. Structure: a computer having a visual editor and grammar parser that are utilized to cut the text into individual components of words or phrases, and equivalents thereof ('731 patent at 5:7-19; 7:1-10)") Document Image Understanding: Geometric and Logical Layout, pp. 386-389. ("Document Image Understanding: Geometric and Logical Layout" by Robert Haralick 1994), describes how technical documents are opened and loaded into word processor software so that its structure may be determined, and the document may be cut/parsed into its logical discrete pieces; e.g., text (words and phrases) and non-text (images), portions, through steps such as segmentation. Refer to Page 386, Col. 1; Page 386, Col. 2; Page 387, Col. 1; Page 389, Col. 1.")	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		A Structure Editor for Abstract Document Objects, pp. 418, 412, and 430-435. ("A Structure Editor for Abstract Document Objects" by Gary Kimura (1986), is several decades old, and describes how common operating systems support document viewers and editors. It describes how objects are selected by their absolute or relative positions when opened, viewed and edited (See p 418). It also discloses how selection is done through use of keystrokes (p 422). Figure 16 describes the commonly used structure for these routine features in word processors and computer operating systems, with support for common editing and viewing operations (p 430- p 435) including type, move, copy, edit, delete, and other such commands on objects. It also explains the routine nature of display operations ("'Formatting and viewing a document for editing or reading involves mapping its abstract representation to a concrete representation (formatting) and then to a display (viewing). The functions described here are used for both editing and reading; they are two distinct functions:	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		• Viewing or visiting an object. This involves creating windows on the screen that correspond to the structure of the document •Putting a concrete image inside each window. The content of a window either corresponds to the object's raw data or is the result of a formatting operation.") (p. 422).") Document Formatting Systems, pp. 419-420, 422, 432 and 444-449. ("Document Formatting Systems: Survey, Concepts and Issues", by Furuta et al (1982) surveys document editing and viewing systems available several decades ago and the routine support for typical operations from the operating systems and the editors. It discloses allocating, mapping and placing objects (p 420, p 447-449). ("Within the object model framework, we can consider the major operations of document processing as mappings from objects to objects. Editing operations are defined as mappings from either abstract to abstract objects or concrete to concrete objects. Conventional text editing operations map logical text objects to logical text objects; for example, a text insertion or deletion may be a mapping	

U.S. PATENT NO. RE 43,633			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		from strings to strings or from paragraphs to paragraphs. Also, editing operations on an already formatted document produce concrete objects from concrete objects. An example of this type of editing is interactively inserting or deleting text from an already formatted paragraph, thereby mapping concrete paragraphs to concrete paragraphs; interactive layout operations such as moving formatted text, tables, or figures around a document are also in this category.") (p. 419)("The abstract document editor is a graphic version of the abstract object module and uses the window object module. The editor understands four classes of commands: structural viewing, content viewing, structural editing, and data editing.")(p. 432).") Ten Years of Window Systems, pp. 35-37. ("Ten Years of Window Systems – A Retrospective View" by Warren Teitelman, discloses how window systems and languages such as Smalltalk directly supported "cut and paste", and how text could be selected and inserted through use of inbuilt commands (p 36). Also disclosed is the	

U.S. PATENT NO. RE 43,633			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		use of address spaces in Smalltalk 76 and Smalltalk 1980.") The Text Editor Sam, pp.6-8 and 18. ("The Text Editor Sam: by Rob Pike, the use of addresses and offsets are disclosed (See p 6-8). The use of the mouse for interactive editing for the typical operations, such a select, delete, cut and paste, etc. is also disclosed in Figure 2 and Figure 4, for instance. The routine use of pointers, offsets and addresses is also disclosed (See p 18).") U.S. Patent Nos, 5,436,637 and 5,581,670. ("In US Patent 5,436,637, the use of standard operations such as cut, paste, open, copy, delete, is shown in Figure 6A-F (See also Col 2). Use of offsets and addresses is also disclosed (See Col 13)") ("The ability to convert bitmap positions to locations within the document data structures is disclosed in US Patent 5,581,670 (See Col 4 and Col 4). Typical operations such as cut & paste, delete and other selection operations are disclosed (See Col 33-36).") Emacs - Version 18.59 and VI- Version 3.0. ("Emacs -Version 18.59	

U.S. PATENT NO. RE 43,633			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		(ftp://ftp.gnu.org/old-gnu/emacs/) and VI (VIM) Version 3.0 (ftp://ftp.vim.org/pub/vim/unix) are examples of two known visual editors that were capable, in conjunction with a processor's operating system, of opening a document and parsing, indexing and displaying its words during editing. These visual editors likewise could select a display location where user input was received and convert that display location into a position or location within the document structure at which the edit should take place. Either of these visual editors would be a suitable base upon which programming could be added to achieve the claimed functionality of creating look-up table entries for certain words to be displayed in pop-up windows alongside the respective word when desired by a user.") **Declaration of V. Madisetti, ¶**33, 39, 100; 103-109.	

B. U.S. Patent No. 7,672,985

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
"the content"	'985 patent: 2, 12	PROPOSED CONSTRUCTION: the identified content external to the document. INTRINSIC EVIDENCE: ('985 Patent, Abstract ("A term can be selected by applying various rules."); Col. 2:31-52 ("Once the list of terms is assembled, individual terms are assigned to experts to provide supplemental information on the term. A utility is provided to the expert that manages term assignments, allows the expert to analyze the term in context by showing expandable examples of its use in the corpus of documents, and provides the interface for entry of supplemental information as well as meta-data to help characterize the supplemental information. Utilities are provided to the publisher that allow them to establish the rules for choosing the supplemental information which should appear for a term, for tagging the term on the page, and for designing the presentation window for that supplemental information.	Indefinite **Intrinsic Evidence:** Claims 1, 2, 11, 12

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		A content publisher wishing to provide links from woods and phrases in a document to the supplemental information contained in the database installs an automated tagging engine (the RichLink Processor) within their network. The RichLink Processor automatically downloads, from the central database, the data structures necessary to perform high-speed tagging of the text and to execute the tagging rules without requiring a connection to the database at the time of tagging, although it remains possible to do so."); Col. 3:33-36 ("FIG. 1 illustrates the network of modules **100**, that along with human expert analysis, performs interrelated functions that automatically create and deliver database content in the environment of online browsing and/or advertising."); 3:46-48 ("the Richlink Processor that tags documents, the content delivery system for presenting embedded information and an editing Suite for modifying user options.");	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		4:14-26 ("This module **240** is a library that contains all terms and associated content that can be sorted and queried, using business criteria to organize into dictionaries of similar information. Content types such as text, image, Sound, Video, mixed media, and forms may be stored in this database. There is a one-to-many relationship developed between matching terms and content associated with matching terms. Content may be identified in a number of ways to allow automated identification of the dictionary to which it belongs. Examples of identification information are the publisher name, sponsor name, site name, readership, and sponsorship dates. Content may also be associated with metadata to allow automated identification of the category to which it belongs.); 4:60-5:21 ("A user of the system has a home page portal which links them to parts of the system and provides access to personalized content such as news, products and service announcements and promotional items. The homepage includes features such as focused page content, based on the user's profile and	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		preferences. The homepage also contains user information, such as user rights, events, links to account management and eCommerce modules, links to eMarketing modules, links to RichLink Contextual Content server modules, links to a Support and product website, forum links and news, success stories and product announcements. View/Edit Account Information **420** This module enables customer modification of account information, such as contact and technical information. From this module a user is able to view and edit contact information, view and edit technical information, view account balances and invoices, view and edit payment methods, view licenses, select newsletter options, and specify the contents of a user home page. System Rights Administration **430** This module enables companies to assign role-based privileges to a user. For example, the role of marketing manager has privileges related to marketing. Such as, editing the appearance of the RichLink Content Window. The role of an editor has privileges related to content, Such as editing and adding content for terms. Email can be used to	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		notify users of their privileges and of any privilege changes. Error-checking routines are present which ensure the proper privileges are assigned.") 8:35-9:13 ("RichLink Processor **910** This module takes normal source pages and automatically enhances them through links to content from a variety of Sources, such as authoritative reference works and dictionaries, dictionaries of syndicated content, customer-created dictionaries, and dictionaries of sponsored terminology allowing third parties to attach advertising content to occurrences of terms on sites or through tags which identify and provide information about the terms they surround. The result is an enhanced page **175** that contains links to the additional content. Processing may occur in real-time between page request and page display in a web server environment or it may occur offline as a pre-processing step to publishing documents. The process can be performed on common file types such as XML, HTML, RTF Word documents, and Adobe Acrobat PDF files.	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		The Richlink Processor interacts with the Template Object **930** to identify the rules that should be used in processing and the Lexicon Object **920** to identify what terms should be tagged in the Source text. Tags in the page identify whether a page should be processed by the RichLink Processor or not, denote sections of a page to be processed, and indicate the template that should be used in processing that page/section. Tags may be inserted to identify page-level metadata criteria that should be used to limit the result set when tagging the page. For example, a tag may be inserted into the page identifying the page as belonging to the category "Video Games." This tag can then be used to limit matches to terms or annotations that have also been identified as belonging to the category "Video Games". Page-level metadata tags may be inserted ahead of time or when the page is dynamically constructed. When a file is sent to the RichLink Processor, several operations can be optionally run on the text. The text may be parsed, the document categorized, and page-level meta data tags added to the page. The document content may be	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		summarized. Matches between terms on the page and terms occurring in the Lexicon Object for dictionaries specified by the template used with this page are identified. A tag is created around matched terms if meta data or other criteria are met. Typically this tag is a hyperlink that leads to additional annotational content, however additional tag structures can be used. Finally, the document may be inserted into the Term Database as annotational content for identified category key-words.") ('349 Patent, Claim 1, 6, 15, 20 and 31) File History: **A Method of Specifying Links in Hypermedia,** WO 95/04974, pps. 1-4. (cited in prosecution) **Declaration of V. Madisetti,** ¶124-126.	
"the supplemental content"	'985 patent: 6, 16, 22, 23	PROPOSED CONSTRUCTION: the identified content external to the document INTRINSIC EVIDENCE: ('985 Patent, Abstract ("A method and apparatus are disclosed which automatically build a database by automatically identifying a term of interest and building a term database	Indefinite **Intrinsic Evidence:** Claims 1, 6, 11, 16, 21, 22, 23

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		with supplemental content from a assigned source for that term"); 2:31-52 ("Once a list of terms is assembled, individual terms are assigned to experts to provide Supplemental information on the term. A utility is provided to the expert that manages term assignments, allows the expert to analyze the term in context by showing expandable examples of its use in the corpus of documents, and provides the interface for entry of Supplemental information as well as meta-data to help characterize the Supplemental information. Utilities are provided to the publisher that allow them to establish the rules for choosing the Supplemental information which should appear for a term, for tagging the term on the page, and for designing the presentation window for that Supplemental information. A content publisher wishing to provide links from words and phrases in a document to the Supplemental information contained in the database installs an automated tagging engine (the RichLink Processor) within their network. The RichLink Processor automatically downloads, from the central database, the data structures necessary to perform high-speed tagging of the text and to execute the tagging rules without requiring a connection to	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		the database at the time of tagging, although it remains possible to do so.") '985 Patent, Claims 6, 16, 22, 23, 29, 33, 34; '349 Patent, Claims 1, 6, 15, 20, 31. File History: **A Method of Specifying Links in Hypermedia,** WO 95/04974, pps. 1-4. (cited in prosecution) **Declaration of V. Madisetti,** ¶124-126.	
"term module for parsing one or more documents to identify at least one term based on at least one rule"	'985 patent: 11	PROPOSED CONSTRUCTION: Function: parsing one or more documents to identify at least one term based on at least one rule Structure: a computer processor in conjunction with executable code for instructing the computer processor to parse one or more documents to identify at least one term based on at least one rule, and equivalents thereof DICTIONARY/TREATISE DEFINITIONS: **Microsoft Press Computer Dictionary. The Comprehensive Standard For Business, School, Library, and Home (1994)**, page 292 ("to break input into smaller chunks so that a program can act upon the information") **IBM Dictionary of Computing (1994), p. 439 (module)** (1) In programming languages, a language construct that	Subject to §112 ¶ 6. Function (agreed): "parsing one or more documents to identify at least one term based on at least one rule" Structure: None/indefinite **Intrinsic Evidence:** 2:21-30; 6:50-7:4; 9:1-13; Fig. 7; Sept. 14, 2009 Response to Office Action at 11-12, 13-14; Dec. 1, 2009 Examiner Interview Summary; Dec. 28, 2009 Notice of Allowance at 2-10. **Extrinsic Evidence:** Materials from prior Sentius litigations. Declaration of Jon Weissman.

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		consists of procedures or data declarations and that can interact with other such constructs; for example, in Ada, a package; in FORTRAN, a program unit; in P1../1, an external procedure. (I) (2) A program unit that is discrete and identifiable with respect to compiling, combining with other units, and loading; for example, the input to or output from an assembler, compiler, linkage editor, or executive routine. (A) (3) A packaged functional hardware unit designed for use with other components. (A) (4) A part of a program that usually performs a Particular function or related functions. (5) In FORTRAN, an external program unit that contains or accesses definitions to be accessed by other program units. See standard module. (6) See bound control module, control module, disk storage module, load module, object module, programming module, source module, unbound control module. (7) Synonymous with program unit. (8) See also encapsulated type, run file. INTRINSIC EVIDENCE: ('985 Patent, Figures 1, 7, 9A and 9B and 2:21-26 ("The process begins by identifying terms of interest within a corpus of documents. Term identification may be accomplished by crawling and parsing the corpus to select terms	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		through application of rules, such as, a term was not previously in the database, an unusually frequent use of the term, the term is an article, or the term is an unusual part of speech."); 6:53-57 ("The term finder module performs a full text index of a corpus of documents such as a website and generates a list of terms that may be of interest **700**. The term finder is directed to a top-level folder and then recursively crawls through that folder and every sub-folder searching for all files that match a specified file type or types."); 7:35-52 ("Terms from the database are tagged in Source documents **760** using the RichLink Processor or other automated methods such as those disclosed in U.S. Pat. No. 5,822,720, System and method for linking streams of multimedia data for reference material for display, Oct. 13, 1998, Bookman et al. The tag can serve functions such as linking to a RichLink Content Window containing additional information or marking the term for an application performing further processing of the page. The final result **770** is a tagged and	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		annotated enhanced document **175**. The RichLink Content Window **170**, which displays information related to the term, is available by clicking on a tagged term. The information contained in a RichLink Content Window comes from a multitude of sources including annotations added by experts **740**, related products or services, sponsorship information, information from content syndicators, translations and reference works. Term List Editor 620"); 8:35-50 ("RichLink Processor **910** This module takes normal source pages and automatically enhances them through links to content from a variety of sources, such as authoritative reference works and dictionaries, dictionaries of syndicated content, customer-created dictionaries, and dictionaries of sponsored terminology allowing third parties to attach advertising content to occurrences of terms on sites or through tags which identify and provide information about the terms they surround. The result is an enhanced page **175** that contains links to the additional content. Processing may	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		occur in real-time between page request and page display in a web server environment or it may occur offline as a pre-processing step to publishing documents. The process can be performed on common file types such as XML, HTML, RTF, Word documents, and Adobe Acrobat PDF files."); 8:51-58; ("The Richlink Processor interacts with the Template Object **930** to identify the rules that should be used in processing and the Lexicon Object **920** to identify what terms should be tagged in the Source text. Tags in the page identify whether a page should be processed by the RichLink Processor or not, denote sections of a page to be processed, and indicate the template that should be used in processing that page/section."); 9:1-4 ("When a file is sent to the RichLink Processor, several operations can be optionally run on the text. The text may be parsed, the document categorized, and page-level meta data tags added to the page.");	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		9:37-42 ("The Template Object provides a local representation of the Template that contains the rules for processing and linking a file so a direct connection to the Template Database is not required and the Template Database may be on a remote server from the RichLink Processor."); '349 Patent, Claims 1, 31) EXTRINSIC EVIDENCE: *Sentius v. Microsoft* Claim Construction Order, dated January 9, 2014 (Dkt. 66) p. 2 ("Function: parsing one or more documents to identify at least one term based on at least one rule Structure: a computer processor in conjunction with executable code for instructing the computer processor to parse one or more documents to identify at least one term based on at least one rule, and equivalents thereof") **Declaration of V. Madisetti,** ¶50, 95-98, and 127-131.	
"processing module for identifying content for the at least one term"	'985 patent: 11	PROPOSED CONSTRUCTION: Function: "identifying content for the at least one term" Structure: "a computer processor in conjunction with executable code for instructing the computer processor to use a data object to identify content for the at least one term, and equivalents thereof"	Subject to §112 ¶ 6. Function (agreed): "identifying content for the at least one term" Structure: None/indefinite **Intrinsic Evidence:**

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		INTRINSIC EVIDENCE: ('985 Patent, Figures 1, 7, 9A and 9B and 2:44-56 ("A content publisher wishing to provide links from woods and phrases in a document to the supplemental information contained in the database installs an automated tagging engine (the RichLink Processor) within their network. The RichLink Processor automatically downloads, from the central database, the data structures necessary to perform high-speed tagging of the text and to execute the tagging rules without requiring a connection to the database at the time of tagging, although it remains possible to do so. The RichLink Processor performs routine synchronization of its data structures with the database to insure that changes to content within the database, tagging rules, or presentation rules aare reflected locally."); 7:35-44 ("Terms from the database are tagged in Source documents **760** using the RichLink Processor or other automated methods such as those disclosed in U.S. Pat. No. 5,822,720, System and method for linking streams of multimedia data for reference material	2:21-30; 6:44-49; 8:34-9:17; 9:17-58; Sept. 14, 2009 Response to Office Action at 11-12, 13-14; Dec. 1, 2009 Examiner Interview Summary; Dec. 28, 2009 Notice of Allowance at 2-10. **Extrinsic Evidence:** Materials from prior Sentius litigations. Declaration of Jon Weissman.

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		for display, Oct. 13, 1998, Bookman et al. The tag can serve functions such as linking to a RichLink Content Window containing additional information or marking the term for an application performing further processing of the page. The final result **770** is a tagged and annotated enhanced document **175**."); 8:36-50 ("This module takes normal source pages and automatically enhances them through links to content from a variety of Sources, such as authoritative reference works and dictionaries, dictionaries of syndicated content, customer-created dictionaries, and dictionaries of sponsored terminology allowing third parties to attach advertising content to occurrences of terms on sites or through tags which identify and provide information about the terms they surround. The result is an enhanced page **175** that contains links to the additional content. Processing may occur in real-time between page request and page display in a web server environment or it may occur offline as a pre-processing step to publishing documents. The process can be performed on common file types such as	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		XML, HTML, RTF Word documents, and Adobe Acrobat PDF files."); 8:51-58; ("The Richlink Processor interacts with the Template Object **930** to identify the rules that should be used in processing and the Lexicon Object **920** to identify what terms should be tagged in the Source text. Tags in the page identify whether a page should be processed by the RichLink Processor or not, denote sections of a page to be processed, and indicate the template that should be used in processing that page/section."); 9:1-12 ("When a file is sent to the RichLink Processor, several operations can be optionally run on the text. The text may be parsed, the document categorized, and page-level meta data tags added to the page. The document content may be summarized. Matches between terms on the page and terms occurring in the Lexicon Object for dictionaries specified by the template used with this page are identified. A tag is created around matched terms if meta data or other criteria are met.	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		Typically this tag is a hyperlink that leads to additional annotational content, however additional tag structures can be used. Finally, the document may be inserted into the Term Database as annotational content for identified category key words."); 4:20-26 ("Content may be identified in a number of ways to allow automated identification of the dictionary to which it belongs. Examples of identification information are the publisher name, sponsor name, site name, readership, and sponsorship dates. Content may also be associated with metadata to allow automated identification of the category to which it belongs.") EXTRINSIC EVIDENCE: *Sentius v. Microsoft* Claim Construction Order, p. 2 Function: "identifying content for the at least one term". Structure: a computer processor in conjunction with executable code for instructing the computer processor to identify content for the at least one term, and equivalents thereof") **Declaration of V. Madisetti,** ¶132-135.	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
"means for parsing one or more documents to identify at least one term based on at least one rule"	'985 patent: 20	PROPOSED CONSTRUCTION: Subject to §112 ¶ 6. Function (Agreed) "parsing one or more documents to identify at least one term based on at least one rule" Structure: "a computer processor in conjunction with executable code for instructing the computer processor to parse one or more documents to identify at least one term based on at least one rule, and equivalents thereof DICTIONARY/TREATISE DEFINITIONS: **Microsoft Press Computer Dictionary. The Comprehensive Standard For Business, School, Library, and Home (1994)**, page 292 ("to break input into smaller chunks so that a program can act upon the information") INTRINSIC EVIDECE: ('985 Patent, Claim 1, '349 Patent, Claim 1) ('985 Patent) Figures 1, 7, 9A and 9B and 2:21-26 ("The process begins by identifying terms of interest within a corpus of documents. Term identification may be accomplished by crawling and	Subject to §112 ¶ 6. Function: "parsing one or more documents to identify at least one term based on at least one rule" Structure: None/indefinite **Intrinsic Evidence:** 2:21-30; 6:50-7:4; 9:1-13; Fig. 7; Sept. 14, 2009 Response to Office Action at 11-12, 13-14; Dec. 1, 2009 Examiner Interview Summary; Dec. 28, 2009 Notice of Allowance at 2-10. **Extrinsic Evidence:** Materials from prior Sentius litigations. Declaration of Jon Weissman.

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		parsing the corpus to select terms through application of rules, such as, a term was not previously in the database, an unusually frequent use of the term, the term is an article, or the term is an unusual part of speech."); 6:53-57 ("The term finder module performs a full text index of a corpus of documents such as a website and generates a list of terms that may be of interest **700**. The term finder is directed to a top-level folder and then recursively crawls through that folder and every sub-folder searching for all files that match a specified file type or types."); 8:51-58; ("The Richlink Processor interacts with the Template Object **930** to identify the rules that should be used in processing and the Lexicon Object **920** to identify what terms should be tagged in the Source text. Tags in the page identify whether a page should be processed by the RichLink Processor or not, denote sections of a page to be processed, and indicate the template that should be used in processing that page/section.");	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		9:1-4 ("When a file is sent to the RichLink Processor, several operations can be optionally run on the text. The text may be parsed, the document categorized, and page-level meta data tags added to the page."); 9:37-42 ("The Template Object provides a local representation of the Template that contains the rules for processing and linking a file so a direct connection to the Template Database is not required and the Template Database may be on a remote server from the RichLink Processor."); Claims 1, 21; '349 Patent, Claims 1, 31 EXTRINSIC EVIDENCE: Document Image Understanding: Geometric and Logical Layout, pp. 386-389. ("Document Image Understanding: Geometric and Logical Layout" by Robert Haralick 1994), describes how technical documents are opened and loaded into word processor software so that its structure may be determined, and the document may be cut/parsed into its logical discrete pieces; e.g., text (words and phrases) and non-text (images),	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		portions, through steps such as segmentation. Refer to Page 386, Col. 1; Page 386, Col. 2; Page 387, Col. 1; Page 389, Col. 1.") A Structure Editor for Abstract Document Objects, pp. 418, 412, and 430-435. ("A Structure Editor for Abstract Document Objects" by Gary Kimura (1986), is several decades old, and describes how common operating systems support document viewers and editors. It describes how objects are selected by their absolute or relative positions when opened, viewed and edited (See p 418). It also discloses how selection is done through use of keystrokes (p 422). Figure 16 describes the commonly used structure for these routine features in word processors and computer operating systems, with support for common editing and viewing operations (p 430- p 435) including type, move, copy, edit, delete, and other such commands on objects. It also explains the routine nature of display operations ("'Formatting and viewing a document for editing or reading involves mapping its abstract representation to a concrete representation (formatting) and then to a	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		display (viewing). The functions described here are used for both editing and reading; they are two distinct functions: • Viewing or visiting an object. This involves creating windows on the screen that correspond to the structure of the document •Putting a concrete image inside each window. The content of a window either corresponds to the object's raw data or is the result of a formatting operation.") (p. 422).") Document Formatting Systems, pp. 419-420, 422, 432 and 444-449. ("Document Formatting Systems: Survey, Concepts and Issues", by Furuta et al (1982) surveys document editing and viewing systems available several decades ago and the routine support for typical operations from the operating systems and the editors. It discloses allocating, mapping and placing objects (p 420, p 447-449). ("Within the object model framework, we can consider the major operations of document processing as mappings from objects to objects. Editing operations are defined as mappings from either abstract to abstract objects or concrete to concrete objects.	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		Conventional text editing operations map logical text objects to logical text objects; for example, a text insertion or deletion may be a mapping from strings to strings or from paragraphs to paragraphs. Also, editing operations on an already formatted document produce concrete objects from concrete objects. An example of this type of editing is interactively inserting or deleting text from an already formatted paragraph, thereby mapping concrete paragraphs to concrete paragraphs; interactive layout operations such as moving formatted text, tables, or figures around a document are also in this category.") (p. 419)("The abstract document editor is a graphic version of the abstract object module and uses the window object module. The editor understands four classes of commands: structural viewing, content viewing, structural editing, and data editing.")(p. 432).") Ten Years of Window Systems, pp. 35-37. ("Ten Years of Window Systems – A Retrospective View" by Warren Teitelman, discloses how window systems and languages such as Smalltalk directly supported "cut and paste", and how text could be selected and inserted	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		through use of inbuilt commands (p 36). Also disclosed is the use of address spaces in Smalltalk 76 and Smalltalk 1980.") The Text Editor Sam, pp.6-8 and 18. ("The Text Editor Sam: by Rob Pike, the use of addresses and offsets are disclosed (See p 6-8). The use of the mouse for interactive editing for the typical operations, such a select, delete, cut and paste, etc. is also disclosed in Figure 2 and Figure 4, for instance. The routine use of pointers, offsets and addresses is also disclosed (See p 18).") U.S. Patent Nos, 5,436,637 and 5,581,670. ("In US Patent 5,436,637, the use of standard operations such as cut, paste, open, copy, delete, is shown in Figure 6A-F (See also Col 2). Use of offsets and addresses is also disclosed (See Col 13)") ("The ability to convert bitmap positions to locations within the document data structures is disclosed in US Patent 5,581,670 (See Col 4 and Col 4). Typical operations such as cut & paste, delete and other selection operations are disclosed (See Col 33-36).")	

U.S. PATENT NO. 7,672,985			
Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		Emacs - Version 18.59 and VI- Version 3.0. ("Emacs -Version 18.59 (ftp://ftp.gnu.org/old-gnu/emacs/) and VI (VIM) Version 3.0 (ftp://ftp.vim.org/pub/vim/unix) are examples of two known visual editors that were capable, in conjunction with a processor's operating system, of opening a document and parsing, indexing and displaying its words during editing. These visual editors likewise could select a display location where user input was received and convert that display location into a position or location within the document structure at which the edit should take place. Either of these visual editors would be a suitable base upon which programming could be added to achieve the claimed functionality of creating look-up table entries for certain words to be displayed in pop-up windows alongside the respective word when desired by a user.") **Declaration of V. Madisetti,** ¶18, 47, 50, 59-60, 80, 95-98, 103-109, 123, 127-131, 140.	
"means for identifying content for the at least one term"	'985 patent: 20	PROPOSED CONSTRUCTION: Function (agreed) "identifying content for the at least one term"	Subject to §112 ¶ 6. Function: "identifying content for the at least one term"

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		Structure: "a computer processor in conjunction with executable code for instructing the computer processor to use a data object to identify content for the at least one term, and equivalents thereof INTRINSIC EVIDENCE:('349 Patent, Claim 15); ('985 Patent, Claims 1, 11, 21, 36, and 6:44-49 ("Term Discovery Utilities **125** FIG. 6 illustrates the modules in this core component group **125** that automate the process of discovering and collecting terminology. The terms in the list can then be made available for sponsorship or have content associated with them through the Content Manager **1120** module."), 8:35-67 ("RichLink Processor **910.** This module takes normal source pages and automatically enhances them through links to content from a variety of Sources, such as authoritative reference works and dictionaries, dictionaries of syndicated content, customer-created dictionaries, and dictionaries of sponsored terminology allowing third parties to attach advertising content to occurrences of terms on sites or through tags which identify and provide information about the terms they surround. The result is an enhanced page	Structure: None/indefinite **Intrinsic Evidence:** 2:21-30; 6:44-49; 8:34-9:17; 9:17-58; Dec. 1, 2009 Examiner Interview Summary; Dec. 28, 2009 Notice of Allowance at 2-10. **Extrinsic Evidence:** Materials from prior Sentius litigations. Declaration of Jon Weissman.

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		175 that contains links to the additional content. Processing may occur in real-time between page request and page display in a web server environment or it may occur offline as a pre-processing step to publishing documents. The process can be performed on common file types such as XML, HTML, RTF Word documents, and Adobe Acrobat PDF files. The Richlink Processor interacts with the Template Object **930** to identify the rules that should be used in processing and the Lexicon Object **920** to identify what terms should be tagged in the Source text. Tags in the page identify whether a page should be processed by the RichLink Processor or not, denote sections of a page to be processed, and indicate the template that should be used in processing that page/section. Tags may be inserted to identify page-level metadata criteria that should be used to limit the result set when tagging the page. For example, a tag may be inserted into the page identifying the page as belonging to the category "Video Games'. This tag can then be used to limit matches to terms or annotations that have also been identified as	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		belonging to the category "Video Games'. Page-level metadata tags may be inserted ahead of time or when the page is dynamically constructed."); 9:1-58 ("When a file is sent to the RichLink Processor, several operations can be optionally run on the text. The text may be parsed, the document categorized, and page-level meta data tags added to the page. The document content may be summarized. Matches between terms on the page and terms occurring in the Lexicon Object for dictionaries specified by the template used with this page are identified. A tag is created around matched terms if meta data or other criteria are met. Typically, this tag is a hyperlink that leads to additional annotational content, however additional tag structures can be used. Finally, the document may be inserted into the Term Database as annotational content for identified category key words. A user interface is provided which allows administrative access to process and queue controls, view, search and sort log data, and process statistics. Lexicon Object **920**	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		The Lexicon Object provides a local representation of the content of the Term Database for use by the RichLink Processor **910** so a direct connection to the Term Database is not required and the Term Database may be on a remote server from the RichLink Processor. The Lexicon Object contains data required to match terms and create tags Such as a representation of the terms in the database optimized for fast matching by the RichLink Processor, the TermID from the Term Database, the DictionaryID from the Term Database, and other Term Database content for which fast access is required, such as annotation content. The Lexicon Object may be stored once on a single server and accessed by all active Richlink Processor instances running on that server. Or it may be stored once on a central server and accessed by active RichLink Processor instances on multiple servers. It can contain lexicons for multiple dictionaries in a single object instance. Template Object **930** The Template Object provides a local representation of the Template that contains the rules for processing and	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		linking a file so a direct connection to the Template Database is not required and the Template Database may be on a remote server from the RichLink Processor. The Template Object contains the rules required by the RichLink Processor such as dictionaries used for linking or as filters (stop word lists), metadata criteria that must be met when making a match, the format of the tag to be inserted before and after a matched term including macros to be expanded by the RichLink Processor with data specific to the matched term, run-time processing options such as limiting the number of matches found or turning Stemming on and off, and any code required to be placed into the page to enable operation of the RichLink Content Window or other applications. The Template Object may be stored once on a single server and accessed by all active Richlink Processor instances running on that server. Or it may be stored once on a central server and accessed by active RichLink Processor instances on multiple servers. It can contain multiple templates in a single object instance.");	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		and Figures 8A to 8D, 9A and 9B; '349 Patent, Claims 1, 6, 15, 20, 31) File History: **A Method of Specifying Links in Hypermedia,** WO 95/04974, pps. 1-4. (cited in prosecution) **Declaration of V. Madisetti,** ¶48-50, 87.	
"means for associating the at least one term with the identified content"	'985 patent: 20	PROPOSED CONSTRUCTION: Function (agreed) Structure: "a computer processor in conjunction with executable code instructing the processor to display content identified for a given term, and equivalents thereof" INTRINSIC EVIDENCE: ('985 Patent, Claims 1, 11, 21, 36 and 6:44-49 ("Term Discovery Utilities **125** FIG. 6 illustrates the modules in this core component group **125** that automate the process of discovering and collecting terminology. The terms in the list can then be made available for sponsorship or have content associated with them through the Content Manager **1120** module."), 8:35-67 ("RichLink Processor **910.** This module takes normal source pages and automatically enhances them through links to content from a variety of Sources, such as authoritative reference	Subject to §112 ¶ 6. Function: "associating the at least one term with the identified content" Structure: None/indefinite **Intrinsic Evidence:** 2:21-30; 4:13-26; 6:44-49; 7:31-33; 8:34-9:17; 9:17-58; Sept. 14, 2009 Response to Office Action at 11-12, 15; Dec. 1, 2009 Examiner Interview Summary; Dec. 28, 2009 Notice of Allowance at 2-10. **Extrinsic Evidence:** Materials from prior Sentius litigations. Declaration of Jon Weissman.

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		works and dictionaries, dictionaries of syndicated content, customer-created dictionaries, and dictionaries of sponsored terminology allowing third parties to attach advertising content to occurrences of terms on sites or through tags which identify and provide information about the terms they surround. The result is an enhanced page **175** that contains links to the additional content. Processing may occur in real-time between page request and page display in a web server environment or it may occur offline as a pre-processing step to publishing documents. The process can be performed on common file types such as XML, HTML, RTF Word documents, and Adobe Acrobat PDF files. The Richlink Processor interacts with the Template Object **930** to identify the rules that should be used in processing and the Lexicon Object **920** to identify what terms should be tagged in the Source text. Tags in the page identify whether a page should be processed by the RichLink Processor or not, denote sections of a page to be processed, and indicate the template that should be used in processing that page/section. Tags may be inserted to identify page-level metadata criteria that should be used to limit the result set when tagging the page. For example, a tag may be inserted into the page identifying the	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		page as belonging to the category "Video Games'. This tag can then be used to limit matches to terms or annotations that have also been identified as belonging to the category "Video Games'. Page-level metadata tags may be inserted ahead of time or when the page is dynamically constructed."); 9:1-58 ("When a file is sent to the RichLink Processor, several operations can be optionally run on the text. The text may be parsed, the document categorized, and page-level meta data tags added to the page. The document content may be summarized. Matches between terms on the page and terms occurring in the Lexicon Object for dictionaries specified by the template used with this page are identified. A tag is created around matched terms if meta data or other criteria are met. Typically, this tag is a hyperlink that leads to additional annotational content, however additional tag structures can be used. Finally, the document may be inserted into the Term Database as annotational content for identified category key words. A user interface is provided which allows administrative access to process	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		and queue controls, view, search and sort log data, and process statistics. Lexicon Object **920** The Lexicon Object provides a local representation of the content of the Term Database for use by the RichLink Processor **910** so a direct connection to the Term Database is not required and the Term Database may be on a remote server from the RichLink Processor. The Lexicon Object contains data required to match terms and create tags Such as a representation of the terms in the database optimized for fast matching by the RichLink Processor, the TermID from the Term Database, the DictionaryID from the Term Database, and other Term Database content for which fast access is required, such as annotation content. The Lexicon Object may be stored once on a single server and accessed by all active Richlink Processor instances running on that server. Or it may be stored once on a central server and accessed by active RichLink Processor instances on multiple servers. It can contain lexicons for multiple dictionaries in a single object instance. Template Object **930**	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		The Template Object provides a local representation of the Template that contains the rules for processing and linking a file so a direct connection to the Template Database is not required and the Template Database may be on a remote server from the RichLink Processor. The Template Object contains the rules required by the RichLink Processor such as dictionaries used for linking or as filters (stop word lists), metadata criteria that must be met when making a match, the format of the tag to be inserted before and after a matched term including macros to be expanded by the RichLink Processor with data specific to the matched term, run-time processing options such as limiting the number of matches found or turning Stemming on and off, and any code required to be placed into the page to enable operation of the RichLink Content Window or other applications. The Template Object may be stored once on a single server and accessed by all active Richlink Processor instances running on that server. Or it may be stored once on a central server and accessed by active RichLink Processor instances on multiple servers. It can	

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		contain multiple templates in a single object instance."); and Figures 8A to 8D, 9A and 9B. '349 Patent, Claims 1, 6, 15, 20 and 31.	
"A computer program of instructions configured to be readable by at least one programmed computer processor to execute a computer process for performing the method as recited in claim 1"	'985 patent: 10	PROPOSED CONSTRUCTION: Plain and ordinary meaning. **Declaration of V. Madisetti, ¶**137.	Indefinite.
"the source document"	'985 patent: 24, 25, 30	PROPOSED CONSTRUCTION: original document from which data, text or terms are taken DICTIONARY/TREATISE DEFINITIONS: Microsoft, Computer Dictionary, p. 491, ("the original document from which data is taken.") INTRINSIC EVIDENCE: '985 Patent, Abstract ("A method and apparatus are disclosed which automatically build a database by automatically identifying a term of interest and building a term database with supplemental content from a assigned source for that term");	Indefinite.

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Disputed Term	**Claim(s)**	**Sentius' Proposed Construction and Supporting Evidence**	**Zoho's Proposed Construction and Supporting Evidence**
		7:35-44 ("Terms from the database are tagged in source documents **760** using the RichLink Processor or other automated methods such as those disclosed in U.S. Pat. No. 5,822,720, System and method for linking streams of multimedia data for reference material for display, Oct. 13, 1998, Bookman et al. The tag can serve functions such as linking to a RichLink Content Window containing additional information or marking the term for an application performing further processing of the page. The final result **770** is a tagged and annotated enhanced document **175**."); 8:35-50 ("RichLink Processor **910** This module takes normal source pages and automatically enhances them through links to content from a variety of sources, such as authoritative reference works and dictionaries, dictionaries of syndicated content, customer-created dictionaries, and dictionaries of sponsored terminology allowing third parties to attach advertising content to occurrences of terms on sites or through tags which identify and provide information about the terms they surround. The result is an enhanced page	

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		175 that contains links to the additional content. Processing may occur in real-time between page request and page display in a web server environment or it may occur offline as a pre-processing step to publishing documents. The process can be performed on common file types such as XML, HTML, RTF Word documents, and Adobe Acrobat PDF files."); **Declaration of V. Madisetti**	